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RECORD

March 1930

MODERN TRENDS IN ART EDUCATION

By GEORGE J. COX
Professor of Fine Arts, Teachers College

THE recent grant, by the Carnegie Corporation, to the American Institute of Architects, for the encouragement of art courses at Harvard was accompanied by a statement from President Keppel that "art constitutes the great field for adult education." As its importance in the education of the child has been acknowledged for some time, this pronouncement would seem to mark the climax of the phenomenal comeback staged by art in the field of education.

At the beginning of the twentieth century it was a despised adjunct of the faculty of arts, wholly neglected, or thrust into an obscure corner of college announcements, and looked upon with a justifiable contempt by educators. At that time many who elected it had given up hope of majoring in other fields, and its chief function seemed to be the provision of a genteel accomplishment for maiden ladies.

To-day, it is an integral part of the educational fabric, and its influence penetrates not only the progressive schools but the great industries. Though the number of authentic artists is no greater to-day than yesterday, for they are still born helplessly predestinate, it is now hardly true, as it may have been when Dr. Snedden wrote it, that "strong men no longer take up art as a profession." Big business is taking it up, having discovered dividends in it.

Under their astute manipulation, art, of a kind, bids fair to penetrate the farthest recesses of the American scene, from which it was

utterly banished some time in the nineteenth century. The rapid success of their efforts has been materially aided by the unobtrusive spade work of art teachers during the last two decades.

Happily the modern art teachers are aware of the cultural value of the fine arts as well as the importance of the industrial arts in life. They are making honorable amends for the sins of their predecessors, who so smugly stifled creative imagination in the young and excited the derision of thoughtful adults.

Charity suggests that art teachers of the last generation were not wholly to blame for the slough into which art teaching had fallen. They had been reared amidst a peculiarly unlovely civilization that abounded in bad architecture, commonplace statuary and painting, hideous furniture, and absurd costumes. Not only was the creative artist rare; he and his work were suspect. Theologians seem to have contributed to this state of mind, as one would imagine from their notorious incompetence in matters aesthetic. Theodore Parker had openly expressed his preference for Benjamin Franklin as an ideal as against Michel Angelo; and Henry Ward Beecher had condemned the quest for beauty as "all moonshine; with no doctrine nor edification nor sanctity in it," flat-footedly adding "I despise it."

It was a period when, in an excess of hygienic frenzy, cleanliness was looked upon as next to godliness, and beauty next to sin, though judged by modern standards it was neither so well washed or so free from iniquity as might be supposed.

Surrounded by such a hostile atmosphere the artist succumbed, or fled. The art teacher evolved a simple self-protective doctrine and applied it with unquestioning faith. If the eradication of any weakness for beauty was their aim, it was justified by its works. Though its practice still lingers in a few backward communities, a brief outline may be not amiss for those who have fortunately escaped such art instruction.

The methods were cut and dried. The unprotected infant was given a flat, emasculated copy of some antique fragment, devoid of meaning or attraction. A few stereotyped rules for transferring its dull likeness to paper were explained, and the art teacher assumed a monitory attitude until the wretched child had fashioned a recognizable likeness. When a certain mechanical proficiency was obtained he was taught "model drawing"; usually from distressingly ugly

objects—old buckets and boxes, dilapidated books, tin cans and empty bottles. As an antidote to this inorganic mess the pupil was permitted to "draw and shade" dead leaves and decayed vegetables—what the French call with accuracy *nature mort*. Lastly, into a mind already overwhelmed with the tediousness of art instruction were crammed a few complicated and contradictory theories about geometrical drawing and perspective.

Art teachers cherished the delusion, shared then by other schoolmen, that a child's duty was to learn and obey—and that unpleasant tasks were formative of strong characters. As it was then held to be the function of a real artist to be true to life—that is, photographically accurate in representation, or an excellent copyist—this objective was dangled before the sight of potential plumbers, icemen, nurses, cashiers, truckdrivers, doctors, clergymen, stenographers, etc., who, irrespective of native talent, were forced to pursue this mirage. Naturally the most efficient teachers were matriculated top-sergeants; martinets who could make each child hold a pencil at precisely the same angle and draw exactly to tune. To such teachers, and to most supervisors and inspectors, the sight of one hundred little innocents drawing a hundred little teapots, from a copy of a copy, was held to be a high achievement in art instruction, and indeed to have some occult connection with aesthetics.

Thus for many years annual exhibitions showed nothing but meticulous copies of the above-mentioned detritus, translated in gray tones of pencil, charcoal, and sad watery colors.

Individual expression and native imagination were stamped out, and so was any love for art. The majority of the children so mistaught were not gifted, nor yet so foolish as their mentors; they bent their energies to making the grade so that they might the sooner pass on to other and more attractive studies. A fractional percentage might eventually become draughtsmen and apply a very small part of the instruction they had been forced to swallow; but none ever came to an appreciation of art—unless blessed with uncommonly sensitive parents or a rare teacher endowed with a feeling for beauty.

It was a great system, so reduced to rules that it was fool-proof. Thinking was superfluous. "Rub it out and draw it again" was its slogan, and few dared to combat such a pretty theory; some are still trying to make it work. But on the whole this generation has seen

a remarkable change, for diminishing classes and the dwindling respect of educators stimulated thought.

Those who were not satisfied with the rigid system in vogue twenty-five years ago indulged in a somewhat frantic series of experiments. For a period brush work, cut paper work, nature study, memory drawing, and attempts at correlation were all tried out. But their premises were unsound, for they were ignorant of the workings of the child mind. We are still; yet there is now a more sympathetic understanding of the child's reactions to its environment. No longer is an impossible standard demanded, or an unobtainable, and any way useless, objective aimed at. Art teachers now respect the instincts, emotions, and capacities of the child—and the child responds by overstaying the class periods devoted to art.

At the last International Congress for Art held in Prague even those too old to change their own practices gave lip service to the progressive methods that were being exhibited and discussed. There could not be found one teacher to defend or even to say a kind word for the bad old system. Nor did its effects survive, in any virulent shape, in the immense amount of work exhibited—with the ironical exception of that from the Orient, whence much of the impetus for reform derived; and one of the most significant signs of the pervasiveness of the revolution were the evidences of the Dow theory and practice in work from that stronghold of conservatism, England.

It would be tedious to review the changes shown so graphically in the immense building devoted to the Exhibition, and they can be summarized by referring to the most important theories of art instruction as developed in Vienna, to which all the various systems in vogue in Europe and America approximate in varying degrees.

The most noteworthy innovators are Cizek, Thetter, and Rothé. Each holds to opposed theories, but all three have profited by the investigations of psychologists, and have common bond in their sympathetic understanding of the child and the adolescent.

The work of the pupils of Cizek's first school is well known in America and needs no description. He maintains that only a small percentage of children are capable of producing art work that is significant. His pupils were selected, and subtly inducted into art appreciation by being surrounded by an atmosphere of freedom and inspiration. No instruction was given and the pupils were allowed to

use their opportunities as individual fancy dictated. The work produced inevitably had the Cizek hall-mark, but it was by no means stereotyped, and showed an immense advance in both spirit and technique.

Such an aristocratic system, productive though it was of exceptionally interesting work, was directly opposed by the theory and practice of Rothé, another Viennese teacher. He holds very democratic views on art instruction, and believes that almost every child possesses potential gifts that may be developed by rational instruction.

Instead of the exposure and non-interference of Cizek he pursues a definite method of teaching. As an example of the procedure he employed, should the subject chosen deal with an animal, its natural habits and characteristics are studied at first hand, in the zoo or at large; interest is maintained by discussion in class, followed by an examination of primitive and modern artists' treatments of the subject. After such a reasoned approach each student is left free to make his own interpretation, objectively or imaginatively—as he feels the urge—without intervention of the teacher except at an impasse. The results under such a system are surprisingly good and of a notably high standard.[1]

It is such a rational system that produced the very interesting series of drawings from German schools recently exhibited in America under the auspices of the American Federation of Arts. The Archives of Munich contain thousands of such drawings collected by Dr. Von Pechman, all carefully documented, with photographs and brief life histories of the young artists. They provide a valuable addition to the resources of the art teacher and an absorbing field for study.[2]

Thetter, the third innovator from Vienna, believes in neither the Rothé nor the Cizek method. His iconoclastic theories have a strongly emotional basis, for he holds that an intellectual approach is a handicap to artistic expression.

His aim is the release of the child's emotional forces. Technical facility is lightly esteemed and accurate representation is disregarded —he seeks above all to stimulate the creative imagination into prac-

[1] Richard Rothé's methods are set forth pictorially in a series of small books, published under his name by the Deutscher Verlag fur Jugend und Volk, Vienna.

[2] Some idea of the scope of this work may be gained from "New Ways of Art Education," the catalogue published by the American Federation of Arts, 40 East 49th Street, New York City. Price, 25 cents; obtainable from Miss Helen Plumb, associate.

tical activity. The results are distinctly unorthodox and provocative. They cannot be ignored, and they show a distinct kinship with the arts of the creative periods—more particularly the primitive. Though they naturally possess the naïve immaturity all childish work exhibits, this closely resembles the disconcerting strangeness of even adult attempt to express authentic emotions with unfamiliar techniques.

Whatever one's intellectual or emotional bias, it has to be admitted that all three teachers have imbued their pupils with an admirable sense of freedom. Their works run the whole gamut from strangely subjective and imaginative fantasies to treatments of common objects in a scrupulously finished and objective style.

In varying measure such works disclose color and movement and spontaneity, a feeling for powerful design—and often a delicate precision. In all cases it exhibits a decidedly personal note, in glowing contrast to the dull, uninspired uniformity so painfully obtained under the old system. In every case it would appear that, as Professor Littlejohns observes, "the child is led to believe that what he does cannot be wrong, because he does it gladly and freely. . . ." Thus love casts out fear, and whatever one's opinion of the results obtained or the methods employed, that is a refreshing change.

The theory and practice of this Viennese trinity is the mine from which have been quarried almost all the various methods now in vogue in Europe and many of those in America. Littlejohn, who has brought the breath of life back into elementary art instruction in England, acknowledges their inspiration with gratitude. The Ecôle Primaire de la Seine—which produces an abundance of brightly colored and quite admirably designed figure compositions of a high order of merit—is clearly indebted to the original Cizek school. This influence is felt in many lesser centers, though he has now developed, in his latest teaching, an expressive and dynamic style of an extremely "modern" type. This work, done in the Wiener Kunstgewerbeschule, is well illustrated in *Form wille der Zeit*, L. W. Rochowanski, and is another potent source of inspiration for the modernist in art.

Its adoption by the Duncan School of Salzburg, though sponsored and approved by Cizek, seems to indicate that in weaker hands and with less gifted pupils there is a palpable danger of attenuation and mannerism—or at least so it seemed to the writer. Other developments, such as the system, first employed by Oskar Rainer, which

seeks to stimulate the creative and emotive faculties by means of music, are productive of exciting color schemes and expressive movement in abstract design. It would seem, however, to constrict unduly the field for self-expression, and even to run the risk of developing a neurosis by over-stimulation of already susceptible imaginations.

But enough has been said to indicate the sources from whence many of the more notable private schools of America derive their original inspiration.

Their practices have been intelligently modified to suit the American scene and the American child—whether by Mme. Galka Scheyer in Berkeley, California, or by Miss Cane in New York. Their influences are to be discovered in the great mass of undistinguished but by no means unworthy work turned out by the average public and high school, though here the note is mingled with an echo of the attractive superficiality that seems to be engendered by the aesthetic of Hollywood, the brighter periodicals, the protean costumiers, and the mendacious advertiser of to-day. This engaging sophistication threatens to develop a style of its own, in which artificiality becomes a natural expression, as in the heyday of the French Rocaille—in which case it may require another generation before the intelligent efforts of really modern art teachers bear universal fruit.

Perhaps the corrective may come not from Austria but from across the Rio Grande.

In Mexico a vigorous and natural system is being developed, if such flexible and sympathetic methods of art instruction can be called a system. Primitive conditions, native simplicity and sincerity, picturesque surroundings, and intelligently enthusiastic direction seem to conspire in the production of an autochthonous art—an art as yet happily unconscious of any pet theory or ism. When this genuine if primitive culture impinges upon the advanced civilization of the United States, the results may be extraordinarily interesting.

At first glance it might seem that this cross-fertilization has commenced in California. But closer observation discloses that, despite geographical proximity, this state has no more direct contact with Mexican school art than several others. Yet the fusion of primitive and civilized elements is strangely suggested. Amongst the American exhibits shown at Prague its contributions stood out vividly. It had color in abundance, spirit, technique, and a sense of composition; in

short—life. The Chouinard School, the Anna Head School, the Los Angeles city schools, all showed work that compared favorably with that from more widely known schools in the East, and excited the interest of European art teachers.

The work of the Anna Head School was remarkable for its spontaneous, even explosive, emotional quality. But though the presence of various foreign theories was to be felt in the other exhibits, the chief impression was one of the pervading influence of the late Professor Dow's teaching.

To Teachers College graduates perhaps the most interesting, certainly the most pertinent, of the above exhibits was that of the Los Angeles public schools, done under the direction of Miss Gerehart, a pupil and disciple of Professor Dow. She has developed his theory and practice in a manner which, judged by results, seems admirably suited to the exigencies of teaching in the public schools.

The success of her methods indicates a great advance in the standards of the elementary school teachers. It suggests also that the Dow method, with such additions or modifications as child psychology dictates, still holds its own with the best educational theories of the European schools. To-day it appears to have nothing novel or exciting about it; it neither panders to the neurotic nor makes concessions to the phlegmatic, but in its fine balance of the emotional and the intellectual, in its insistence upon spirit as well as skill and power as well as knowledge, it still provides a solid foundation upon which more immediately attractive or spectacular or revolutionary theories may be tried out, without undermining the solid basis of art education now building in the public schools.

If an attempt is made to summarize the changes wrought in art education during the last twenty years we find them inherent in his *Theory and Practice*, though in justice to many of his devoted followers it must be admitted that the latter have made many thoughtful adjustments to fit them for use in the grades and high schools.

Briefly the changes are as follows. Art is no longer taught as an isolated subject, but as an integral part of all other school activities. It is no longer a mere matter of training hand and eye for the acquisition of specialists' skills, of no particular value to any one but a mechanic, yet only to be obtained at the cost of every aesthetic emotion. At its earliest stage the play instinct is allowed full scope;

the child fiddles energetically with clay and crayon and color, releasing baby inhibitions, burning up motor activities and producing weird symbols indicative of an infant heaven. Later manipulation is discreetly guided and lays the foundation of the simple techniques necessary to convey ideas with some degree of conviction. Accuracy comes later, and in any case the old meticulous skills are no longer valued. Color plays an important part in developing fresh interests, new fields are explored, and new approaches made to old problems. Memory, descriptive and imaginative drawing and composition are attempted, and poetry and music are called in to stimulate the imaginative life. Direct, fearless statements are encouraged and self-expression is allowed full play.

The methods approximate to those favored by the most progressive educators in other fields, and art teachers now respect the instincts, emotions, and capacities of the child. By means of lessons and projects graded to suit the mentalities addressed, they seek to enlarge the creative faculties, improve skills, and develop an appreciation that will be of service to the child in whatever situation it finds itself in after-life.

The art teacher is also somewhat changed. The dull incomprehension of aesthetics has disappeared. They no longer shy at a new experience. They have seen a bright light; yet most of them have recovered from that ecstatic condition in which they believed that every child had some divine revelation to pronounce through the medium of the plastic arts. They know also that there are emotions which mould character and others which render it fluid, and that even the noblest feelings must have heads and hands under control to get anywhere.

They are less enamored of gaudy experiments and esoteric theories which lead nowhere, and more anxious to reassert the abiding principles of art which are to be found linking up the great creative periods. They know that in one sense the fine arts cannot progress —having no point of similarity with aviation, radio, television, the reduction of the atom, and like scientific pursuits—and that, save for the somewhat different texture of his mind and the more nervous complexion of his emotions, the raw materials of the creative artist remain much the same as they were in the time of Pericles or Lorenzo dei Medici. And that the modern artist must work with brush or

chisel which differ not at all from those employed in painting and sculpture two or three thousand years ago.

But he is satisfied that art in the schools provides an opportunity for individual expression on all planes of experience and for all capacities. He is keen to detect the embryo artist and conduct genuine talents into productive channels; above all he is anxious to induct all, whether creative or merely imitative, into the great and benevolent order of art appreciators.

Under the guidance of such teachers the art lesson is no longer a joke or a bore. It provides contacts with what educators call life-situations, and it is readily correlated; it motivates many other activities, assists intellectual and emotional growth, inculcates desirable habits, and enriches everyday existence. In short, we may say that the best modern art instruction provides the vitamins of education, without which much of our educational philosophy lacks real nourishment for the soul. For proof of which the doubting reader is referred to the writings of John Dewey.

We have, then, in action to-day methods that appear sufficiently progressive and intelligent to serve the needs of the schools for the next decade. Ten years might be profitably spent in consolidating the recent gains rather than in searching for novel theories; in enlarging the field of operations and thoroughly testing procedures and results rather than in vain attempts to accelerate the generation of creative artists.

Taking it by and large, art teaching in America is in a healthy condition. There is still a hiatus to be filled out, but that also is being rapidly bridged. It is the adolescent gap which often dislocates the connection between the puppy-love of art all children exhibit and the sustained devotion of the more mature students who may go on to major in art, or pursue the minor rôles of critics and appreciators.

A survey of the whole field shows that the American school boy and girl are in an enviable position when their opportunities for art-contacts are compared with those within the reach of the average child in Europe. There the all-important subject of art appreciation is often entirely neglected, and there is nothing like a comparable activity in the matter of tests and their verification.

What is not so satisfactory is that so many of the young, who are taught to genuflect before the real or reproduced masterpiece, have

so little opportunity to indulge in the pursuit of beauty after school hours. It may be a Spartan practice to open the eyes of the young to the sin of ugliness and then throw them amidst its most stupefying effects; but it is hardly in keeping with modern psychology and pedagogy. Nevertheless the majority are forced to play in streets that shriek their ugliness to heaven, or live in suburbs that flaunt a tawdry vulgarity by day and by night.

Here on the whole they are less happily situated than children in Europe, or even the American child of the last generation. It will be interesting to observe whether the impetus given to adult education by the Carnegie Foundation accelerates the correction of such abuses. Even now, through the efforts of art teachers, the activities of the great museums, and the intelligent self-interest of the producers and vendors of the industrial arts, the stage is rapidly being set for the abolition of ugliness in the American scene; which is after all a far more important matter than the cultivation of aesthetics.

We are already within measurable distance of the utilitarian beauties Emerson described in his much-quoted verse. The average American home is now infinitely more comely than the best were a few years ago, if pictorial records may be believed. And this civilizing influence has spread to almost every institution of importance; to apartment houses, hotels, stores, banks, factories, public schools, and occasionally even colleges. To-day in some degree everyone is art-conscious, for aesthetics are linked to economics, and it is known that beauty pays.

The sanguine teachers with a touch of imagination foresee the time when mankind is once more endowed with an instinctive sense of beauty. Sometimes they think that they perceive those "arts tho' unimagined yet to be" of which Shelley sings in "Prometheus Unbound," for they see increasingly about them "shapes grow more fair . . . as man grows wise and kind."

Such a splendid future may be long in coming, yet this hopeful state of mind seems fairly justified when we look back at the swift progress of art education in the twentieth century.

SEX-EDUCATION IN PARENTAL EDUCATION*

By M. A. BIGELOW

Professor of Biology and Director of the School of Practical Arts, Teachers College

ON the primitive levels of human life sex and parenthood were on an instinctive basis and worked out their biological destinies as automatically as breathing. Why, then, should education in civilized life undertake to interfere with, modify, or control the natural relations of sex and parenthood? In other words, why sex-education in parental education? Why not let instinct manage sexual and parental affairs in civilized as in primitive society?

The general answer to all such questions is that education aims to make available to all intelligent persons the discoveries of the natural and social sciences relating to sex and parenthood, because it is only through application of scientific knowledge that we can raise individual and family life to higher and still higher levels of satisfaction and efficiency. Had there not been all the way up from barbarism application of many discovered facts and ideas which we now classify in the natural and social sciences, it is obvious that sexual and parental affairs would still be on the lowest level.

Parenthood among animals and primitive humans is instinctive and automatic, and involves little more than physical development and care of young ones. Our complex civilized life has changed the duties and privileges of parenthood so much that practically nothing after birth is left to instinct. Even the feeding of the baby, which was once instinctively managed, is now regulated by the clock which reminds the mother of the directions given by doctors, nurses, and printed guides on how to take care of babies better than nature suggests.

We could accumulate many illustrations of the fact that from early prenatal life to the end of adolescence the physical, psychical, and social relations of parents and children in this modern world are

* From notes on an address at the New England Health Conference, April, 1929.

exceedingly complicated, far away from the instinctive reactions that governed in primitive life, and appear to be getting more involved with each succeeding generation. The business of being good parents, far from the original duties of feeding and protecting immature offspring, has become the most complicated business of modern fathers and mothers.

Why has parenthood become so complicated in modern, civilized human life? The answer might be very long, but for the purpose of this paper it may be brief. Parenthood to-day is complicated because it involves many rights granted or accorded to modern children. It is now generally recognized that children have rights as follows: (1) the eugenic right to be well-born or to have a good heredity, (2) the right to hygienic or health-promoting prenatal and postnatal life, (3) the right to the best social environment in the home, and (4) the right to preschool or home education as a basis for school education. All these rights suggest that the modern parent needs some biology in order to understand heredity and eugenics, some physiology and embryology relating to prenatal life, some hygiene and sanitation which concern the healthy conditions of childhood, some family sociology for managing the social conditions of the home, some child psychology which may guide early mental development, and some nursery school and kindergarten methods in order to conduct preschool education in the home. Clearly, the job of an up-to-date and modern parent is a complicated and challenging profession.

Training for parenthood has two distinct aspects: (1) training for married life or comradeship of husband and wife, and (2) training for the physical, psychical, and social care of children in the home. The first is overlooked by many writers and speakers on parental education. These to a very large extent confine their attention to the kind of problems which face the educator in nursery schools and kindergartens; in other words, they regard parental education as directed toward the physical, psychical, and social care of children in the home, preceding or paralleling similar care of children in the school up to the years of adolescence.

Concerning the importance of such training for the duties and privileges of parenthood there can be no dispute. Beyond question, it is desirable that all parents should know as much as possible about the physical, mental, and social problems of childhood. The main

task in this line which is now facing educators is that of selecting and putting into form for use in homes, the most important information which average intelligent parents should have. Obviously, there must be selection from the great mass of information which is available for experts on child development. Even an attempt at outlining such desirable material would lead too far from the title of this paper. To those who want general references, I mention the excellent publications on child life issued or recommended by the Child Study Association of America, the American Child Health Association, the United States Bureau of Education, and the United States Children's Bureau. Fortunately, high schools and colleges are including training for parenthood in their curricula, especially under household arts (home economics), hygiene, and social sciences. This will surely result in producing a large group of educated men and women who will be better prepared for parenthood than our parents and grandparents were.

Now, what has sex-education to do with training for parenthood? The answer requires a clear understanding of the aims of sex-education. Sex-education, which is now frequently called "social-hygiene education," presents the facts and problems of life that are concerned with all the relations of men and women and children in this world of ours. Obviously, this means the relations of the human sexes; and hence, the compound word "sex-education." Quoting from a widely circulated pamphlet of the American Social Hygiene Association: "Sex-education includes all educational measures which in any way may help young people prepare to meet the problems of life that have their center in the sex instinct and inevitably come in some form into the experience of every normal human being. These problems extend over a vast range of life's experiences from simple little matters of personal sex health to the exceedingly complicated physical and social and psychical problems that concern successful marriage and its relationships."

One does not have to subscribe to the extreme and unproved assertions and analyses of certain disciples of so-called "new psychology" to recognize that children are often seriously influenced by conflicting relations of their parents. Any one with a smattering of physiological study knows that unhappy, irritating, and jarring relations of parents may so affect the sensitive nervous systems of children that

both physical and psychical disturbances may result from the reactions set up. The world is so full of examples of such effects of parental disharmony that even a statement of their existence seems commonplace to physicians and others who know the physiology of childhood. I mention this line of facts only to make the point that the greatest task of advanced sex-education is to help young parents adjust their physical, mental, and social life with a view to reducing to the minimum the possible shocks which marital discord gives to developing children.

The right of children to harmonious home environment is, then, a sufficient reason why young people should be educated to be happy in marriage and especially be happy while they are parents dealing with childhood and youth. This ideal does not, of course, conflict with parents being happily married for the sake of their own personal joy. What I want to make positive and convincing is that children have a right to happily married parents or, conversely, parents owe their children the opportunity to grow up in an atmosphere of married happiness. This is the new ideal for the successful parents of tomorrow. Sex-education, under its own or various other names, is doing more than any other force or movement toward making satisfying and satisfactory marriages from the standpoints of the children as well as of the parents. Herein lies the fundamental relationship of sex-education to parental education.

At this point you will naturally raise the question: What in the educational part of the social-hygiene program is directed toward preparation for happy and successful marriage? I select a few important answers on which all leaders of social hygiene agree.

Social-hygiene education is helping young people understand the important meanings of sex as the foundation of the physical and social relationships of marriage. The American social-hygiene movement aims to educate young people to control and manage the sex instinct for the purpose of securing the greatest social good and at the same time protect the health and happiness of individuals. For this reason social-hygiene education stands for the protection, preservation, extension, improvement and development of monogamic family life based on accepted ideals. Monogamic idealism means the fullest development in family life of the possibilities of friendship and affection, which in human life have been added to the instinctive

mechanism for biological reproduction. In short, the whole American sex-education movement, as distinguished from certain mere sex-information or sex-hygiene campaigns, centers in the greatest good or well-being which may come to individuals and society from sex life culminating in affection as the basis for the monogamic family. This is the most important of the aims of social hygiene.

Social hygiene recognizes that a high percentage of the disharmonies between married persons arises from misunderstanding of sex, and especially from vulgar interpretation of sex. Correcting vulgar interpretation of sex by education has not proved an easy task for many adults, and it has become evident that it is far better to prevent the development of vulgarized attitude in childhood and youth. This is the common result or gain from sex-education begun in early childhood, preferably in the home, and continued in schools and colleges in appropriate parts of the biological and social sciences, physical education, hygiene and health education, household arts or homemaking, general literature, etc. In all these subjects there are numerous opportunities for helping young persons fix the idea that the sex side of life is natural, beautiful, respectable. Such teaching is the best preventive of vulgar attitude and interpretation of sex.

Social-hygiene education may justly claim to have pushed the wholesome understanding of sex to the attention of millions of intelligent people with the result that the sex factor in human life, especially in its relations to affection, parenthood, marriage, the home, and the family, is rapidly gaining a dignified place among other topics of intense human interest. This bringing of sex out of the shadows of secrecy and degradation is probably the greatest and most helpful accomplishment of the social-hygiene movement up to date.

Social-hygiene education aims to use biology in high schools and colleges as the pathway to applied eugenics, that is, marriages with forethought concerning the good and bad hereditary traits of the two prospective parents. Writers on parental education would do well to emphasize this point.

The above paragraphs have suggested superficially some of the leading lines along which sex-education prepares for successful marriage, in which understanding of the relation of life and affection makes the married comrades successful parents because they create a better social atmosphere for children in the home. The fact is that

it is now extra-hazardous for educated young persons to marry without at least as much sex-education as they can get by reading selected books which will help them understand the relations of sex, love, marriage, and parenthood.

Social hygiene has come to take a decidedly optimistic and constructive attitude toward the serious difficulties and problems in the home and family life of a minority of married persons. It is recognized that a very high percentage of these problems may be prevented or corrected along social hygiene lines, especially by education for marriage and parenthood. The leaders of social hygiene in America and Great Britain agree with the already famous report of the Committee on Church and Social Service in the Federal Council of the Church of Christ in America that "we need not fear for the ultimate future of monogamic marriage." However, we must bear in mind that the strains and stresses in most families are, in the last analysis, due to the conflicts and misunderstandings of the sexes, which social hygiene education aims to correct.

Sex-education, as a well organized movement in the United States, has now over twenty years of successful history. Thousands of young persons who received its lessons ten or more years ago are now parents. From such young parents there is a constantly increasing mass of testimony that sex-education helped in personal life, in marriage, and in parenthood. Those who have learned and lived the principles and the ideals taught have no doubt when we declare boldly that sex-education must become a fundamental part of training for parenthood.

FOREIGN STUDY UNDER TEACHERS COLLEGE

By BENJAMIN R. ANDREWS

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AMERICAN teachers are traveling abroad in increasing numbers and for a few selected groups Teachers College has organized opportunities for foreign professional study abroad under members of the College faculty. The College has for five years sent American teachers of French to study in the Sorbonne under the supervision of its own staff and, thus, last January Professor Cru took a party of fifteen regular Teachers College students for a half year's work in Paris. During the summer of 1929, two additional field classes studied abroad: one a group of American school supervisors and students of education under Professor Thomas Alexander, making a survey of the German school system; the other a party of American home economics teachers under the direction of the writer, making a study of English home and community economics and standards of living.

The English party comprised twenty-five college and normal school teachers, state and city supervisors, secondary teachers, and rural extension leaders; all out of active home economics or health work positions, who, having registered in a summer session course at Teachers College, landed in Plymouth June 30. For two weeks in London and two weeks in central England, Wales, and Scotland the party visited schools and colleges giving homemaking instruction, inspected housing and health work, and by visits to homes, farms, and factories, and by conferences with nearly seventy leaders in educational, industrial, and social activities learned something of English standards of living and their conditioning factors. The field study had been preceded by directed reading before the group left America; it was accompanied by note-taking and discussion, and followed by the writing of reports after the return to America. The coöperation of

English leaders had been secured by means of preliminary correspondence by the instructor who, in advance, organized the month's program with an average of three inspection trips or conferences a day.

King's College of Household and Social Science, University of London, opened Queen Mary's Hostel as a residence for the class while in London, and the Warden, Miss Helen Reynard, arranged an opportunity the first day for meeting leading home economics workers. Later, the Council of the Association of Teachers of Domestic Subjects entertained the party at a luncheon following which addresses were made by leaders of the organization who had gathered at London to meet the American party. Since education in the domestic subjects was of primary interest, visits, with conferences, were made to the following teacher-training institutions: London—the Domestic Science Department of the Battersea Polytechnic Institute, the National Training School of Cookery, and King's College of Household and Social Science of London University; Gloucester—the Training College for Domestic Science Teachers which is connected with Bristol University, the first of the university affiliations which are now being advocated. A committee of the group also visited the domestic science training colleges in Liverpool, Manchester, and Leeds and the whole party had conference-inspections of the two Scotch training schools at Glasgow and Edinburgh.

Other aspects of education related to the home were studied in such institutions as the Rachel McMillan Nursery School, one of several nursery schools which members of the party visited, the North Islington Infant Welfare Center, the Wandsworth Technical Institute, and the County Secondary School at Clapham, London. The class studied with great interest the Women's Institutes, nearest counterpart to our rural homemaking extension service. Lady Denman, National President, outlined their program at a special meeting at the London headquarters, and further details were given by Mrs. Watt, who introduced the Institutes from Canada into England during the War. Half the class attended the annual meeting of one of the County Institutes at the home of the Hon. Mrs. Ralph Glyn, at Wantage.

In studying the English educational system of which domestic education is a part, the class had the advantage of contacts with the

London schools and with inspectors of the (National) Board of Education, and of addresses on English education delivered by the Duchess of Atholl, former Parliamentary Secretary for Education, Mr. Willson of the Oxfordshire County Education Authority, and Mr. Household of the Gloucestershire authority.

Many of the class were concerned with American rural home-making education; hence the English rural situation was of great interest. In London, Miss E. H. Pratt of the Ministry of Agriculture spent an evening with the group and gave an analysis of English agricultural education and the plans for extending rural education of girls and women. The class visited the Cambridge University Department of Agriculture, the Department of Agricultural Economics at the University College of Wales, Swanley Horticultural College for Women, the Agricultural College for Women at Studley, the Hertfordshire Secondary Agricultural Institute at St. Alban's, the original Agricultural Experimental Station at Harpenden, and the Research Station for Food Preservation at Chipping Campden. In each case members of the staff had arranged a special conference for the visitors. In London the national headquarters of agricultural organizations were visited. These included the National Union of Farmers, the Bureau of Rural Industries, the National Community Council, and the Horace Plunkett Foundation for Agricultural Coöperation.

An afternoon conference at Oxford had been arranged by the Oxfordshire Rural Community Council with a half dozen speakers on work for rural betterment, including health, schools, women's institutes, adult education, and university extension. The following day Miss M. K. Ashby, the rural educationist, provided a village conference at her summer home in Shenington, Banbury, where Dr. Forte, the village physician, and Miss Ashby herself gave a vivid picture of village standards of living. The conference on Welsh rural conditions with Professor A. W. Ashby at Aberystwyth, the outline of Scottish agriculture and related education by Mr. Alexander McCallum of the Agricultural Department of Scotland, and visits to farms in Wales and England and to the National Agricultural Fair in Scotland, gave further insight into the rural situation.

England, in common with other European countries, is making a vigorous attack upon the inadequate housing of the low-income worker

and in London, Birmingham, Manchester, and Edinburgh the party, under the guidance of municipal officials, inspected the municipal housing estates. One striking example was the Tabard Street property in London with its eighteen acres of slum clearance now rebuilt with improved apartment construction and with half the area left free for play spaces, one of a great chain of London municipal developments housing over 200,000 persons. In Manchester, the corporation is spending ten million dollars in building five thousand houses a year. It has already constructed twenty-five thousand houses and has a program calling for as many more. While in all these cases the construction is financed by the municipality, aided by state subvention, the cost will ultimately be in large part paid out of rent; for example, in Manchester's present construction there is a 15 per cent subsidy. The assuming of this loss, and much larger losses on earlier construction, is justified in English opinion as a necessary health expenditure. In Edinburgh, slum families who have been living in sub-human conditions have been transferred to detached houses with apparent results in raising standards, proving, for them at least, the falsity of the statement that "the slum mind will make a slum no matter how good surroundings you provide."

Especially significant as having pointed the way toward municipal housing was Bournville, the initial garden suburb created at Birmingham forty years ago by the Cadbury Chocolate Company, and now a community of nine thousand "working" people enjoying living conditions which, under an undirected system, could scarcely be matched by families of twice their income, with detached houses, gardens, playgrounds, club houses, etc. Bournville led to Sir Ebenezer Howard's "To-morrow" in 1898, which sketched the social control of housing and town planning as the way to wholesome living conditions, and Howard's idea was forthwith embodied in Letchworth, 1905, the first "garden city" or planned community providing its people both employment and homes, and more recently in Welwyn and other satellite towns. Bournville, Letchworth, and Welwyn, with the municipal and private housing estates and the profession of property management by trained women overseers on the Octavia Hill plan, comprised one of the most significant demonstrations for the class; viz., the English organized attack on the housing problem which is the fulfillment of an earlier prophecy of an English public

health leader: "The struggle of the last generation was to secure pure water and municipal waste disposal; our next municipal struggle will be for light and air in urban living."

The countryside as well as the cities had the attention of the class. Traveling from point to point by char-à-banc in Devon, Oxfordshire, the Cotswolds, Warwick, and Wales gave opportunity for broad observation, and visits to farms and small villages added detail to the general picture. The first day in England the party visited the estate of Mr. and Mrs. Leonard Elmhirst at Dartington Hall, Totnes, a combined agricultural, industrial, and educational enterprise which is, in effect, a large-scale experimental school with definite attention to the household arts. Later in the same day, at the village of Ipplepen, the vicar, Rev. H. R. Cooke, outlined his community welfare program of a women's organization, a social and athletic club, folk dancing, a thrift enterprise, allotment gardens, and the like carried on under church auspices. Repeated contacts were made with the movement for rural preservation and amenities. Thus at Gloucester the Rural Preservation Committee explained its work of conserving distinctive historic design and construction in private buildings, of securing in service stations and other modern construction buildings that would copy local styles, and, by regional planning, of solving problems such as "ribbon-building" along main roads.

Industrial conditions, particularly those affecting the family, were given special consideration. The social insurance system, the trade boards which set wages, industrial legislation, and living conditions were outlined by speakers representing the Trades Union Congress, the Ministry of Labor, the government insurance departments and the Christian Social Council. Compulsory social insurance includes not only compensation for industrial accidents, as in America, but also provision for unemployment, sickness, and old age at the joint expense of employees and employers who make payments weekly to insurance funds to which the state also contributes. The underlying principle of its administration has been: seek facts to go on, measure results, adjust the system to meet conditions as they develop. One learned that the "dole" is not a "dole" but is self-supporting group thrift working for financial security and wholesome living conditions for the lower-income section of society.

Various businesses and industries were inspected: A Manchester

cotton mill, the baking establishment of a great chain of London restaurants, markets, and stores; a chocolate factory, the Worcester Porcelain Works, and others. Especially significant were the industries of the garden cities, that had definitely left the metropolis to make possible working and living under more wholesome conditions.

Was it possible for the party to gain access to the "castle" of the Englishman's home? The fine spirit of hospitality which the party met everywhere was manifested especially in the homes that were opened to us. The group were guests at the home of Lady Spielman, who discussed housekeeping in a London city home, explaining equipment and appointments, organization of servants and the changing conditions in domestic employment. Dame Henrietta Barnett, cofounder of Toynbee Hall, welcomed the class at her home in Hampstead Garden suburb, a housing development for which she herself is responsible, one which will ultimately house 25,000 people. Here other private homes were opened to the party, including Waterlow Court, a coöperative housing enterprise for professional women. In London and Glasgow members of the party were invited into the homes of working families. Our understanding of Letchworth and Welwyn was clarified by the informal talks with members of a dozen households. One group enjoyed especially calls at Welsh farm homes; another group were guests at a reception given by Lady Astor.

"Are you coming over to help us or to help yourselves?" asked the Oxford student whom we met on the Channel steamer. The trip was throughout professional in purpose and, thanks to the many who coöperated, its purpose was richly realized. It was a broadening experience to study those features of a national society with which one is constantly concerned in his own professional work at home.

"What did you learn?" There was much of direct suggestion to bring home, of course, but more important was the better understanding of the professional task back home as one viewed it in comparison with English conditions. The study had the enduring stimulus of any travel, but the stimulus was focused on one's own professional work.

The course officially closed July 27 with the luncheon given by the Housing Committee of the Council at the City Hall, Edinburgh. A half dozen students worked on special problems for an additional fortnight in London, however. Most of the group went to the

educational meetings at Geneva or Elsinore, or traveled elsewhere before returning to the United States, thus finding economy in combining summer study with the opportunity to travel independently.

What was done in this home economics graduate course could be done under College auspices for groups of workers in other educational fields through Intersession or Summer Session field courses organized around the particular interests of the group, with visits to schools and teacher-training institutions, group conferences with European educational leaders and study of social and economic institutions that affect education of the particular type considered. Curriculum, methods of teaching, placement of the specific subject in the school and its relation to the social situation, methods of training and supervising teachers, all could be profitably examined in any subject matter field, as could types of education, forms of school organization, and other broad educational problems. With any such objective, field study abroad will lead the experienced visiting teacher to a more constructive comprehension of his own tasks at home. What individual members of the College staff have found so stimulating in the study of foreign education can be made available for a score or more of experienced American teachers, going under the leadership of a staff member. There is much travel now among teachers, but the pity is that it is not making its optimum professional contribution, as it might by organized opportunities for the study of particular educational interests. If education is a reorganization of past experience for increased efficiency, this method of foreign study has high professional value for experienced teachers.

IMPROVING READING ABILITY AMONG TEACHERS COLLEGE STUDENTS

By GOODWIN WATSON
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AND THEODORE M. NEWCOMB
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A CLASS of about two hundred graduate students coming to Teachers College on Saturday mornings for a general introductory course in Educational Psychology was asked to carry on the following experiment.

Each student chose a book of non-fiction prose of moderate difficulty and approximately equivalent in form to a good textbook. Each was asked to read for ten minutes as rapidly as was consistent with getting the thought. The number of words read was counted. Practice material consisted of a textbook in educational psychology in which no reading had been done. The texts most widely used were those of Gates, Thorndike, Sandiford, Jordan, and Thompson. At the same time each day for the ensuing six days each student spent ten minutes reading from the psychology textbook. Endeavor was made to speed up this reading as much as possible. On the sixth day a retest was made with the same type of prose used in the initial test. This material had not been read in the meantime.

To facilitate the practice, the following six suggestions were offered:

1. It is possible for most students to improve in reading even though they have attained a relatively high degree of excellence.

2. Speed can be increased if useless motions are eliminated. Lip movement, whispering, pointing, and head movements slow up reading and are unnecessary.

3. Speed does not require strain. Relaxation of most muscles with a moderately pleasant interest in the reading is the attitude recommended.

4. The most rapid reading involves the fewest and shortest fixations. Endeavor to see phrases, sentences, perhaps paragraphs, at a glance. Eliminate long stops on particular words and keep the eye movement going steadily forward without retracing.

5. If your mind wanders, remember that it is not going *from* this material but *toward* something else. Recognize the drive that has called you away from the job and definitely plan to take up the problem at some more convenient time. Often a note on a near-by pad will be sufficient reminder to prevent the matter from injecting itself into the reading again.

6. The most important advice is to try to anticipate what the author is going to say. Use the reading not passively as an attempt to absorb ideas but as a check to discover whether or not the author is developing the idea as you would expect him to. It is seldom necessary to read every word or every sentence.

In the computation of the results, the papers of those students who had completed the experiment exactly as directed were divided into three unselected groups of fifty each. This afforded a rough check on the reliability of the results. Table I shows the average number of words read in the initial test, in each of the six practice periods, and in the final test. The means show a steady rise during the practice period from 250 words a minute to 292 words a minute. The reading on the initial test averaged 275 words a minute—on the final test, 319. The curve for each of the three chance groups is much like that of the others.

TABLE I

AVERAGE NUMBER OF WORDS READ PER MINUTE

CHANCE GROUPS	INITIAL TEST	PRACTICE PERIOD						FINAL TEST
		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	
Group A	269.1	241.7	250.1	256.2	254.5	266.2	274.3	308.3
Group B	275.7	249.1	266.2	269.9	278.7	291.0	307.3	319.4
Group C	279.1	257.9	273.7	271.1	271.5	284.5	293.9	330.4
Mean	274.6	249.6	263.3	265.4	268.2	280.6	291.8	319.4

Table II presents the same results in terms of the improvement as a per cent of the original performance. It indicates an average improvement of about 16 per cent.

Table III shows day-by-day improvement on the practice material from the psychology text. This indicates a fairly steady rise. The

TABLE II

AVERAGE IMPROVEMENT ON FINAL TEST AS PER CENT OF INITIAL PERFORMANCE

Group A	14.6%
Group B	15.8
Group C	18.3
Mean	16.2%

TABLE III

AVERAGE PER CENT OF IMPROVEMENT ON PRACTICE MATERIAL EACH DAY OVER PERFORMANCE ON PRECEDING DAY

CHANCE GROUPS	PRACTICE PERIOD					AVERAGE DAILY GAIN
	Monday (2nd)	Tuesday (3rd)	Wednesday (4th)	Thursday (5th)	Friday (6th)	
Group A	3.5%	2.0%	−0.3%	4.6%	3.0%	2.6%
Group B	6.9	1.4	3.3	4.4	5.6	4.3
Group C	6.1	−0.9	0.1	4.8	3.3	2.7
Mean	5.5%	1.4%	1.2%	4.6%	3.0%	3.1%

TABLE IV

AVERAGE DAILY IMPROVEMENT EXPRESSED AS A PER CENT OF INITIAL PERFORMANCE ON PRACTICE MATERIAL

CHANCE GROUPS	PRACTICE PERIOD				
	Monday	Tuesday	Wednesday	Thursday	Friday
Group A	3.5%	4.6%	5.3%	10.1%	13.5%
Group B	6.9	8.4	11.9	17.0	24.0
Group C	6.1	5.1	5.3	10.0	14.0
Mean	5.5%	6.4%	7.5%	12.4%	17.2%

students did about 3 per cent better each day than they had done the preceding day.

Table IV gives the same facts expressed as a summation and based always on the amount read in the first practice period. The sixth practice period found the students able to read about 17 per cent more than they could read at the first practice period.

Table V, giving the standard deviations, shows a somewhat greater variety of performance on the final test than on the initial test, but no clear tendency for spread to increase during the practice period.

TABLE V

STANDARD DEVIATIONS OF EACH GROUP

(Units Are Words Read per Minute)

CHANCE GROUPS	INITIAL TEST	PRACTICE PERIOD						FINAL TEST
	Sunday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Friday
Group A	81.4	77.2	75.6	65.4	84.8	84.2	77.8	94.6
Group B	92.6	71.0	74.6	76.8	74.6	77.8	76.8	86.4
Group C	89.2	89.2	95.8	78.4	95.5	85.4	84.0	114.8
Mean for the Three Groups of 50 Each ...	87.7	79.1	82.0	73.5	85.0	82.5	79.4	98.6

The following correlations tend to show that there was a very slight relationship between progress in reading rate and initial speed, achievement in psychology and intelligence.

CORRELATION OF PROGRESS IN READING RATE, 150 CASES

	r
Progress and Initial Speed	.158
Progress and Survey Quiz in Psychology	.090
Progress and Otis S.A. Test (Higher)	.217

There is the possibility that students considered it to their advantage to turn in test results showing decided improvement, although an attempt was made to guard against this attitude when the instructions were originally given. Some pertinent information was avail-

able at this point from another source. Later in the year the same students were given a chance to score their own test papers under conditions so arranged that each student's true score could be compared with his reported score. It was found that about one-fifth of the students in the class had raised their scores from 1 to 8 points, out of a total of 38 points. A comparison of the progress in the rate of reading reported by these students and that reported by the rest of the class revealed no significant difference. The average per cent of improvement reported by this one-fifth of the class was 13.6 per cent, as compared with 16.2 per cent reported by the other four-fifths. There was a slight tendency for those who raised their scores three or more points to report greater progress in reading than was reported by those who raised their scores fewer points.

CONCLUSIONS

The following conclusions seem to be warranted:

1. The average student in this class can, by paying conscious attention to speeding up his reading, read 15 per cent to 20 per cent more material of a given kind in a ten-minute period after six ten-minute periods of practice distributed over a week.

2. Improvement in the rate of reading in given subject matter gave the students in this class, on the average, an equally improved rate in other subject matter. In other words, the increased rate of reading was not dependent on the vocabulary or the point of view peculiar to the given subject matter.

3. These students would probably have been able to improve much more if the experiment had been prolonged. Improvement was more rapid during the fifth and sixth days of practice than on the first four days. In fact, when the practice ceased the learning curve was mounting more rapidly than at any previous time.

4. It may well be that "high pressure" could be maintained over a ten-minute period that would not continue through longer periods. The results for longer periods of reading were not obtained.

5. The test periods showed, though the practice periods did not, greater variation after practice than before.

6. There was a very slight tendency for the individuals whose initial speed was greater and whose intelligence was higher to make more progress in reading rate.

A FOREIGN LANGUAGE PROGNOSIS TEST

By PERCIVAL M. SYMONDS

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IN 1925 the writer undertook, as one of the projects of modern foreign language study, the construction of a prognosis test of ability to succeed in the study of a modern foreign language. Preliminary testing was carried on during the year 1925–26.[1]

As a result of studies following this preliminary testing, the most promising material was selected and revised. Some of the tests were recast into a more objective form and others were lengthened with a view to increasing their reliability. Finally eight tests were assembled and printed in two booklets by the Bureau of Publications, Teachers College. During the years 1927–28 and 1928–29 these revised tests were administered extensively and the results studied. The present report gives data concerning the predictive value of the revised tests and announces their publication in a third revised form.

In the assembling of the first printed revision of the tests it would have been preferable in some ways to have printed all the tests in a single booklet. It is believed that at least two hours of testing is necessary to achieve the needed reliability of testing. Most teachers, however, would balk at using a test which required two hours to give. Accordingly, a concession was made by printing the tests in two booklets, Form A and Form B, of four tests each. The tests were so allocated that either form might be used alone as a satisfactory modern foreign language prognosis test, although Form B seemed to show slightly higher predictive value. It is not known whether this is really the case, or is merely an artifact resulting from giving Form B after Form A. It may be true that pupils taking the two tests become adapted to the tasks as they proceed, so that later tests are more valuable for purposes of prediction than earlier tests. The best re-

[1] A report of this preliminary testing constitutes Chapter 6 in *Prognosis Tests in the Modern Foreign Languages*, Volume XIV of the Publications of the American and Canadian Committees on Modern Languages, published by the Macmillan Company, 1929.

sults are, of course, obtained by using both tests and everyone who wishes to obtain the best prediction of language ability is urged to use both tests together.

Esperanto was used in these tests because the tests were intended to be used as prognosis tests of ability to learn any foreign language ordinarily taught in school. Esperanto is an artificial language with roots taken from the Romanic and Germanic languages and with a grammar that is logical and consistent throughout. If prediction of success in any one language had been intended, it would have been better to use that language directly in the prognosis test itself. But with Esperanto it is probable that almost equally satisfactory results are obtained and no language is particularly favored or discriminated against.

DESCRIPTION OF FORM A

Test 1. English Inflection. The idea for this test was obtained from the Iowa Placement Examination Series F-A-1, Revised A, Foreign Language Aptitude Part 1-B. The present test consists of thirty English sentences. The pupil is directed to make certain inflectional changes in nouns, pronouns, and verbs in each sentence. For instance, the directions state:

> The directions at the left of each sentence tell you to change some word in the sentence to another form. Write your answer in the parentheses at the right.
>
> EXAMPLE: Change the *verb* to the future tense.
>
> John came with the books. (*will come*)
>
> The verb in the sentence is *came*. The future tense of the verb *to come* is *will come*, which is written in the parentheses at the right.

This test obviously tests a pupil's knowledge of certain grammatical terms and his ability to make certain inflectional changes in English. These abilities are in the nature of prerequisites to foreign language study; hence a pupil who can perform these thirty exercises successfully shows that he has an advantage in beginning his work in a new language.

Test 2. Word Translation—English to Esperanto. The idea for this test was obtained from Part 4 of the Iowa Placement Examination—Foreign Language Aptitude mentioned above; but the form

and material of the present test are new. A brief paragraph in Esperanto is given, and directly beneath it is placed a direct translation in English. Since the pupil taking the test uses the English translation to interpret the Esperanto, the constructions in the English version are direct translations of the Esperanto, even though often clumsy and awkward. The test itself is a vocabulary test in the multiple choice form; the test words are given in English and the five alternate words in Esperanto. The pupil must find the Esperanto word which correctly translates the English word by comparing the two versions of the paragraph. He indicates the answer by placing in the parentheses at the right the number of the word he selects.

EXAMPLE:

like (1) tiam (2) kiam (3) amis (4) eniris (5) povas (3)

There are thirty of these items. The scoring is objective according to the key used.

This is primarily a test of vocabulary, but in the search for the Esperanto equivalent to the English words other language abilities are tested. Presumably most pupils in searching for the word equivalents are governed primarily by similarities in the root forms of the words and perhaps slightly by their length. Position of the word in the sentence may also help.

Test 3. Sentence Translation—Esperanto to English. This test was constructed by the author particularly for the prognosis language ability. First a vocabulary of Esperanto words used in the test is given, together with the English equivalent of each word. The test consists of twenty-five Esperanto sentences the correct English translations of which must be recognized from one of four English versions. Each word used is given in the vocabulary. After each group of five items two rules of Esperanto grammar are given, and in the next five items these rules find application. The example which the pupil may use as a model for the work is as follows:

EXAMPLE:

La knabo staras en la domo.

..... The boy runs in the field.
..... The friend stands in the field.
..... The boy runs in the house.
....X.. The boy stands in the house.

By looking at the vocabulary list I find that

la means *the*
knabo means *boy*
staras means *stands*
en means *in*
domo means *house*

So the Esperanto sentence means in English:

The boy stands in the house.

and a cross is placed before the fourth English sentence because that is the correct translation of the Esperanto sentence.

The foregoing test measures both vocabulary ability and the ability to interpret inflected forms.

Test 4. Related Words. This test is taken directly from Test 2 of the Iowa Placement Examinations, Foreign Language Aptitude. The original Iowa test contained 40 items. The present version consists of the twenty-five easiest sentences arranged in order of difficulty. In each sentence there is one italicized word. The pupil must guess the English equivalent of this word. Esperanto, drawing as it does from the Romanic and Germanic languages for its roots, bears a vague resemblance to English. Guided by these vague clues the pupil must try to decipher the English equivalent.

EXAMPLES:

La suno kaj la *luno* brilas. *moon* .....

La *urbo* Bostono estas granda. *city* .....

DESCRIPTION OF FORM B

Test 1. Word Translation—Esperanto to English. This is a companion to Test 2 in Form A. As in the previous test, a paragraph is given in Esperanto and directly beneath it is the literal translation into English. The test itself is reversed in this form. Thirty Esperanto words are given and the English equivalents must be chosen from the five alternatives given in each case. Pupils must arrive at a meaning of the equivalents of the Esperanto words by comparing the Esperanto version of the paragraph with the English version.

Test 2. Artificial Language. This test was originally constructed by Stuart C. Dodd, formerly of Princeton University. It was submitted by C. C. Brigham for use in the intelligence test for colleges prepared by L. L. Thurstone and sponsored by the American Council of Education. This artificial language test has now gone through several editions in this intelligence test.

The test consists of twenty short sentences of three to six words each, to be translated—some into English from an artificial language, and some into the artificial language from English. All words used in the test may be reduced to ten root words given in a vocabulary at the beginning. Rules are given for grammatical and inflectional changes in the artificial language as follows: (1) forming plurals, (2) expressing past tense, (3) expressing future tense, (4) forming nouns from verbs, (5) forming adjectives from verbs, (6) forming adverbs from verbs.

As given in the colleges, reading and comprehending the directions is part of the test and is included in the time allowed for taking it. In the Foreign Language Prognosis Test, very detailed directions are read aloud by the examiner, and the pupil is given ample opportunity to discover the nature of the task before he is set to work within definite time limits.

This is primarily a test of ability to follow certain rules regarding inflection. It also implies ability to understand certain grammatical terms and the language sense necessary to carry out the rules.

Test 3. Sentence Translation—English to Esperanto. This is a companion to Test 3 in Form A. In the former test the translation was from Esperanto to English. In the present form the process is reversed and the translation proceeds from English to Esperanto. As before, there are twenty-five items in the multiple response form, and after each group of five items two grammatical rules are introduced so that the sentences become progressively more difficult and complex from the language point of view.

Test 4. Formation of Parts of Speech in English. This test in English measures the functional knowledge of parts of speech. Words are given and the pupil is instructed to change each word from its present form to the part of speech indicated.

EXAMPLES:

Noun	a. repeat	*repetition*
		.....

Verb b. removal *remove*
.....

In the first example the task is to make a noun out of *repeat*. The noun is *repetition*. In the second, the verb form of *removal* is required. Fifty similar items are included in this test.

In Table I is given a statistical summary of the various subtests of Form A and Form B showing the time allowed for each test, the number of items, and the mean and standard deviation based on testing more than 800 high school pupils beginning their study of a foreign language.

TABLE I

SUMMARY OF MODERN FOREIGN LANGUAGE PROGNOSIS TESTS

TEST	TIME IN MINUTES	NO. OF ITEMS	MEAN	S.D.
Form A				
Test 1	10	30	4.4*	4.3*
Test 2	10	30	9.0	5.3
Test 3	12	25	11.1	4.2
Test 4	12	25	12.5†	6.5†
Total	44	110	37.1	16.7
Form B				
Test 1	10	30	8.9	4.7
Test 2	12	74	34.8	16.2
Test 3	12	25	11.2	4.3
Test 4	10	50	22.1	10.4
Total	44	179	76.2	30.8

* Mean and S.D. for Test 1, Form A, refer to the results of using the 20-item test in the second edition.

† Mean and S.D. for Test 4, Form A, refer to the results of using the 40-item test in the second edition.

In the program of validating the tests they were given in the schools listed in Table II, during 1928–29. This table also shows the grades in which the tests were used, the language taught, the forms used, and the number of students taking the test.

TABLE II

School	Grade	Subject	Forms Used	Number Originally Tested	Number for Whom Complete Data Were Assembled
A. St. Paul's School, Concord, N. H.	9	French	A, B	84	73
B. Uniontown, Pa.	10, 11	French	A, B	51	40
C. Central Junior High School, Kansas City, Mo.	9	Spanish	A	29	27
D. Westport Junior High School, Kansas City, Mo.	9	French	A	39	33
E. Northeast Junior High School, Kansas City, Mo.	9	Latin	A, B	140	89
	9	Spanish	A, B	86	51
F. Phoenix, Ariz.	9	Latin	B	188	134
G. Sudlerville, Md.	8	Latin	A	27	23
H. Church Hill, Md.	8	Latin	A	32	26
I. Stevensville, Md.	8	Latin	A	23	18
J. Centreville, Md.	8	Latin	A	63	40
K. Washington Irving Junior High School, Des Moines, Iowa	9	Latin	B	60	54

All prognosis tests were given at the opening of the school year in the fall of 1928. Achievement tests were given near the close of the school year in May, 1929, with the exception of Kansas City, where the achievement tests were given in January at the close of the first term.

All pupils were commencing their first formal study of a foreign language with the exception of the boys in St. Paul's School, where all had had three years of Latin and a few had had French or Spanish at other schools.

For achievement tests in French the American Council Beta French Tests and in Spanish the American Council Beta Spanish Tests were

used. In Latin all schools used the New York Latin Achievement Test. These tests were selected as the standardized tests best adapted for testing the results of the first year of language study.[2]

RELIABILITY

In none of the experimental work has the same form of the prognosis test been given twice to the same group of students. The best measure of the reliability of the tests available is the correlation of the two forms of the test with each other. This, however, does not give a true reliability coefficient since Forms A and B are not "similar" in the technical sense. These correlations are shown in Table III.

TABLE III

COEFFICIENTS OF CORRELATIONS OF TOTAL SCORES ON FORM A AND FORM B OF MODERN FOREIGN LANGUAGE PROGNOSIS TEST

SCHOOL	SUBJECT	CORRELATION OF FORM A AND FORM B	*N*
A	French	.73	73
B	French	.77	40
E	Latin	.77	89
E	Spanish	.78	51

Additional evidence of the reliability of the tests may be found by comparing Test 2, Form A, and Test 1, Form B—the Word Translation, English to Esperanto and Esperanto to English; and Test 3, Form A, with Test 3, Form B—Sentence Translation, Esperanto to English and English to Esperanto. (See Table IV.)

As reliability coefficients these are not high. But it should be remembered that they are not true reliability coefficients, and it is

[2] The following persons were responsible for administering the tests in their schools and for scoring them and tabulating the results. The writer takes this opportunity to express his appreciation of their cordial coöperation: Henry M. Fiske, St. Paul's School, Concord, N. H.; J. A. Lubold, Union High School, Uniontown, Pa.; J. N. Jordan, Junior High School, Kansas City; Martha Morgan, Phoenix Union High School, Phoenix, Ariz.; T. G. Bennett, Queen Anne's County High School, Centreville, Md.; Katherine Risser, Washington Irving Junior High School, Des Moines, Iowa.

TABLE IV

CORRELATION OF TESTS CLOSELY RELATED

SCHOOL	CORRELATION OF TEST 2, FORM A, WITH TEST 1, FORM B	CORRELATION OF TEST 3, FORM A, WITH TEST 3, FORM B	*N*
A	.63	.23	73
E	.45	.48	89
E	.34	.42	51
Preliminary testing		.56	94
Preliminary testing		.72	102

TABLE V

CORRELATION OF FORM A, FORM B, AND BOTH FORMS COMBINED, WITH FINAL ACHIEVEMENT TEST

SCHOOL	GRADE	SUBJECT STUDIED	*N*	CORRELATION OF FORM A WITH FINAL ACHIEVEMENT TEST	CORRELATION OF FORM B WITH FINAL ACHIEVEMENT TEST	CORRELATION OF COMBINED FORM A AND FORM B WITH FINAL ACHIEVEMENT TEST
A	9	French	73	.57	.55	.58
B	10, 11	French	40	.65	.73	.74
C	9	Spanish	27	.70	..	..
D	9	French	33	.60	..	..
E	9	Latin	89	.64	.75	.74
E	9	Spanish	51	.45	.52	.78
F	9	Latin	134	..	.62	..
G	8	Latin	23	.63	..	..
H	8	Latin	26	.64	..	..
I	8	Latin	18	.79	..	..
J	8	Latin	40	.34	..	..
G, H, I, J	8	Latin	107	.54	..	..
K	9	Latin	54	..	.47	..
Average				.60	.61	.71

quite probable that to translate into English requires appreciably different abilities from translating into Esperanto.

VALIDITY

The item of most interest concerning the tests is their validity; that is, the degree to which they predict language achievement at the end of a period of study. Table V gives the correlations of the prognosis tests with final achievement in the language studied. These correlations are an index of the predictive value of the prognostic test.

These correlations amply justify the claims made concerning the value of the tests for prognostic purposes. There are three ways of considering the question of the significance of the correlations. One method is to consider the improvement in prediction over a mere chance prediction. Using the formula $1-\sqrt{1-r^2}$ one finds that with a correlation of .60 the improvement of prediction over a pure chance improvement is only .20 while with a correlation of .70 the improvement over chance prediction is only .29. These values are so small that many testing experts discredit the value of tests of this nature for the purposes of prediction.

TABLE VI

CORRELATIONS BETWEEN TERMAN GROUP TEST OF MENTAL ABILITY AND TWO LANGUAGE TESTS

TEST CORRELATED WITH TERMAN GROUP TEST	COEFFICIENT OF CORRELATION			
	Dec.	March	June	Average
White Latin Test				
1st year	.22	.37	.37	.32
2nd year	.46	.46	.37	.43
3rd year	.54	.50	.66	.57
4th year	.46	.52	.71	.56
American Council French Alpha				
1st year	.01	.17	.10	.09
2nd year	.02	.30	.22	.18
3rd year	.54	.56	.58	.56
4th year	.62	.51	.54	.56

Looked at in another way the results are of practical value. If one takes a high or a low score on the prognosis test the results are extremely significant. On the basis of a correlation of .70, a pupil standing in the lower tenth of his class on the prognosis test would have only 5 chances out of 100 of being above average in achievement and the chances are 69 out of 100 that he would be in the lower fifth of his class in achievement. Corresponding conclusions could be drawn concerning those who make scores in the top tenth of the group. From this standpoint the test scores are extremely helpful.

A second method of estimating the significance of these correlations is comparison with correlations found on other tests for which predictive value is claimed. Few data have been published showing the correlation between intelligence tests and the results of objective achievement tests. Table VI presents correlations from some of the writer's own work [3] which show the relationship between the Terman Group Test of Mental Ability and two language tests.

It may be seen from these correlations that the prognosis test predicts language ability considerably better than a commonly used group intelligence test.[3] Every gain in correlation of this kind is of value. Intelligence tests are frequently used in guidance, sectioning, and other features of school personnel work. Better results may be obtained from using a carefully validated prognosis test than from using a test of general mental ability.

A third method of estimating the significance of the correlations is that of estimating the maximum possible correlation. Wood [4] gives the reliability of the American Council Beta Tests as .97 (French) and .97 (Spanish).[5] No statement is given of the reliability of the New York Latin Achievement Tests. The reliability of the prognosis test may be estimated as .80. Then the maximum correlation possible between the prognosis test and the achievement tests used is $\sqrt{.97 \times .80} = .88$. When one considers that other factors besides ability condition achievement, such as interest in subject, school attitude, competing activities, home conditions, one is willing to make allowance for lack of perfect prediction of a mere test of ability.

[3] P. M. Symonds, *Ability Standards for Standardized Tests in the High School.* Bureau of Publications, Teachers College, 1927.

[4] B. D. Wood, *New York Experiments with New Type Modern Language Tests,* p. 40. The Macmillan Company, 1927.

[5] This comparison is not wholly fair inasmuch as the intelligence test results have been combined for several schools.

Finally, there is great mortality between the initial prognosis test and the final achievement test. This elimination affects principally those with lower initial ability. It thus tends to reduce the variability of the groups for which correlations have finally been computed, and hence attenuates the coefficients of correlation. Were it possible to test with the final achievement test the whole group who originally took the prognosis test the correlations would undoubtedly be higher.

All things considered, a correlation of .60 for Form A or Form B separately or a correlation of .70 for the two forms combined yields a very satisfactory and useful prediction. As an actual measure of ability to learn a foreign language it is probable that the relationship is higher than the correlations would indicate. It is the writer's belief that the prognosis tests give an almost perfect measure of *ability to learn* a foreign language, which does not show in the correlations of .60 or .70 because so many other factors besides ability enter into final achievement.

INTERCORRELATIONS

By studying the various intercorrelations it is possible to determine more exactly the kinds of abilities measured by the prognosis test as a whole and by the separate tests of which it is composed.

The American Council Beta French and Spanish Tests consist of

TABLE VII

CORRELATION OF TOTAL PROGNOSIS TEST WITH PARTS OF THE CRITERION

SCHOOL	FORM	SUBJECT	VOCABULARY	READING COMPREHENSION	GRAMMAR
A	A	French	.50	.54	.55
	B		.43	.47	.63
B	A	French	.62	.52	.68
	B		.71	.65	.61
C	A	Spanish	.69	.65	.46
D	A	French	.61	.55	.54
E	A	Spanish	.25	.42	.46
	B		.29	.50	.50
Average			.51	.54	.55

three parts: (1) vocabulary, (2) reading comprehension, and (3) grammar. The correlation of the prognosis test with these three parts separately indicates the kind of language ability which the prognosis test best predicts.

The differences are not great and are by no means consistent from one school to another. Apparently the prognosis test predicts equally the three phases of language ability measured by the American Council Beta French and Spanish Tests.

Correlations of the separate sub-prognosis tests with the criterion were computed. The averages for ten schools for Form A and for six schools for Form B, regardless of the language studied, are given in Table VIII.

TABLE VIII

CORRELATION OF PARTS OF THE PROGNOSIS TEST WITH TOTAL CRITERION AND WITH TOTAL PROGNOSIS TEST

PROGNOSIS TEST	CORRELATION WITH CRITERION	CORRELATION WITH TOTAL FORM
Form A		Correlation with Form A
Test 1. English Inflection	.45	.63
Test 2. Word Translation—English to Esperanto	.38	.74
Test 3. Sentence Translation—Esperanto to English	.41	.72
Test 4. Esperanto Vocabulary	.52	.80
Form B		Correlation with Form B
Test 1. Word Translation—Esperanto to English	.37	.59
Test 2. Artificial Language	.46	.87
Test 3. Sentence Translation—English to Esperanto	.38	.54
Test 4. Formation of Parts of Speech in English	.55	.77

The tests are not equally effective. The three tests which yield the highest correlations are Test 4, Form A, Esperanto Vocabulary, Test 2, Form B, Artificial Language and Test 4, Form B, Formation of Parts of Speech in English. The word and sentence Esperanto translation tests seem less valuable than the others.

The correlations in Table IX are the averages for five schools for Form A and for three schools for Form B. They show nothing

TABLE IX

CORRELATION OF PARTS OF PROGNOSIS TEST WITH PARTS OF THE CRITERION

PROGNOSIS TEST	PARTS OF THE AMERICAN COUNCIL BETA FRENCH AND SPANISH TESTS		
	Vocab.	Read Comp.	Gram.
Form A			
Test 1. English Inflection	.39	.32	.39
Test 2. Word Translation—English to Esperanto	.33	.35	.24
Test 3. Sentence Translation—Esperanto to English	.34	.36	.41
Test 4. Esperanto Vocabulary	.47	.45	.48
Form B			
Test 1. Word Translation—Esperanto to English	.37	.33	.39
Test 2. Artificial Language	.31	.45	.43
Test 3. Sentence Translation—English to Esperanto	.28	.31	.37
Test 4. Formation of Parts of Speech in English	.48	.42	.51

of importance. Test 4, Form B, which gives the best prediction of grammar, is also the best prediction of vocabulary. Esperanto Vocabulary, Test 4, Form A, which has the highest correlation of any test with reading ability, .45, correlates still more highly with vocabulary and grammar, .47 and .48. No single prognosis test may be selected as giving a differential prognosis of separate language abilities.

The question arises concerning the advisability of weighting the separate tests in each of the batteries in some simple way for the purpose of obtaining the highest multiple correlation. The advantage of so doing may be simply determined by ascertaining the multiple correlation obtained when all subtests are weighted one each as compared with that obtained when weighted most advantageously with the regression coefficients. The following values were found:

Form A
- Multiple R, using equal weights (1.0) ..... .606
- Multiple R, using regression weights ..... .624

Form B
- Multiple R, using equal weights (1.0) ..... .608
- Multiple R, using regression weights ..... .625

It does not seem worth while to use a complicated system of weighting to gain .018 and .017 multiple R, respectively. As Keys says, "Office workers in public school systems are few, and demands on their time are heavy. The necessity for even a simple weighting of averages is likely to result in no averaging at all. Even though the time were available, it must be recognized that the process of weighting greatly enhances the liability to error in the hands of the average clerical assistant. To insist upon weighting for the sake of a relatively small gain in reliability is likely to prove straining at a gnat and swallowing a camel." Consequently it seems best to score the test merely by adding up the number of correct responses on the various items.

Means and standard deviations for all records which are available are given in the table on page 545. For these means and sigmas the distributions of scores of pupils taking all languages have been thrown together, since it was found that the differences between schools and between classes were greater than between languages. These data cannot be used as norms, since Tests 2 and 4 of Form A have been revised in the third edition. It is quite evident that Test 1 of Form A, having a mean score of 4.4 out of 20 items, was too difficult. The revision is described in the first part of this article. Test 4 was also too difficult. Here the difficulty seemed to be that certain items were too difficult and they have been eliminated, cutting this test from forty to twenty-five items. Finally, Test 2, Form A, Test 1, Form B, were made easier by having the directions for the test and the English paragraph read aloud by the examiner, leaving the pupils the entire ten minutes for the test itself.

Percentiles norms are not available at present, and the writer will be grateful to any who use these tests for records of the scores on them.

SUMMARY

A prognosis test of ability to learn foreign languages has been constructed which gives very gratifying results. In recent experimental work it was found that the correlation between Form A, given before the study of a language was commenced, and achievement in a language after a year's study is .60 (average of ten schools). The corresponding correlation for Form B is .61 (average of six

schools). The correlation between both forms combined and final achievement is .71 (average of four schools).

The prognosis tests are more highly predictive of ability to learn a foreign language than the correlations indicate for these reasons:

1. Neither the prognosis test nor the achievement tests are perfectly reliable.

2. Pupils who dropped the language before the end of the year and who usually make low scores both on the prognosis test and the achievement test are not included in the correlations.

3. Achievement at the end of the year is conditioned by other factors than ability, such as studiousness, school attitude, outside activities, interest, and the like.

Prognosis tests ought to find a place in the school testing program. They may be used, in the first place, for guidance. On the basis of results of the test, pupils may be given advice concerning the probabilities of success in the study of a foreign language which will encourage their efforts or eliminate needless fruitless study and discouragement. The results of the tests may be used for sectioning on the basis of ability. Teachers will find that these and other recent products of scientific inquiry in the testing field enable them to perform their tasks as much more efficiently than the older guesswork methods as the modern automobile is superior to the horse and buggy.

The method of determining the multiple coefficient of correlation in this paper is so simple that it seems worth while to elucidate it fully. Below is given a table of intercorrelations for the tests of Form A, together with the correlation of each of the tests with the criterion. Each of these figures is an average of the results from ten schools.

	Test 1	Test 2	Test 3	Test 4	Sum of Intercorrelations	Sum of Correlations with Criterion
Criterion	.451	.377	.409	.524	1.948	.451
Test 1	1.000	.266	.349	.333	2.085	.377
Test 2	.266	1.000	.392	.427	2.198	.409
Test 3	.349	.392	1.000	.457	2.217	.524
Test 4	.333	.427	.457	1.000	8.448	1.761
Sum of intercorrelations in each column	1.948	2.085	2.198	2.217		

The multiple R with all tests weighted equally equals:

$$\frac{\text{sum of correlations with criterion}}{\sqrt{\text{sum of intercorrelations}}} = \frac{1.761}{\sqrt{8.448}} = .606$$

In finding the true multiple R, one must have the regression weights. The Kelly-Salisbury method is useful here. The regression weights in this problem are:

$$\beta_{01\cdot234} = .27, \quad \beta_{02\cdot134} = .12, \quad \beta_{03\cdot124} = .12, \quad \beta_{04\cdot123} = .33$$

$$\begin{aligned} r_{01} \times \beta_{01\cdot234} &= .451 \times .27 = .1217 \\ r_{02} \times \beta_{02\cdot134} &= .377 \times .12 = .0452 \\ r_{03} \times \beta_{03\cdot124} &= .409 \times .12 = .0491 \\ r_{04} \times \beta_{04\cdot123} &= .524 \times .33 = .1729 \\ \text{Sum} &= .3889 \end{aligned}$$

The true multiple coefficient of correlation is

$$R_{0\cdot1234} = \sqrt{.3889} = .624$$

The theory underlying these procedures may be found in Kelley, T. L. and Salisbury, F. S.—"An Iteration Method for Determining Multiple Correlation Constants," *Journal of the American Statistical Association*, 21:282–92, September, 1926; and Salisbury, F. S.—"A Simplified Method of Computing Multiple Correlation Constants," *Journal of Educational Psychology*, 20: 44–52, January, 1929.

ABSTRACTS OF RECENT RESEARCH IN COOKERY AND ALLIED SUBJECTS

III. MAYONNAISE

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HISTORY OF MAYONNAISE

THE early history of mayonnaise making is only legendary. In some of our earliest cookbooks it is called Bayonnaise, because it is believed to have originated in the old fortified town of Bayonne, France, which is noted for its salad oils. Another theory is that it derived its name from an old provincial word "mahonnes" meaning to mix salad and that the suffix "aisse" evolved because of the old custom that the youngest and prettiest daughter in the family would mix the salad. There is another tale of a chef of the Duke of Mayenne who, while preparing a special salad dressing, suddenly discovered that the cream he was to have used was sour. He daringly substituted olive oil with great success.[11] *

DEFINITION AND STANDARDS OF MAYONNAISE SALAD DRESSING

"That the difficult task of promulgating a satisfactory standard for mayonnaise salad dressing has been accomplished, is told by the recent adoption of a definition and standard by the Secretary of Agriculture, according to an announcement by the Food, Drug, and Insecticide Administration.

"The standards and definitions recommended by this committee are adopted not only by the Department of Agriculture for the guidance of its officials in enforcing the Federal Food and Drugs Act, but also by many states in the enforcements of state laws. In some states the standards and definitions adopted by the Department of Agriculture are, ipso facto, official for state use.

"The text of the definition and standards is as follows: 'Mayon-

* Numbers in brackets refer to the sources listed in the Bibliography, page 565.

naise, Mayonnaise Dressing; Mayonnaise Salad Dressing, is the clean, sound, semisolid emulsion of edible vegetable oil and egg yolk, or whole egg, with vinegar and/or lemon juice, and with one or more of the following: salt, spice, sugar. The finished product contains not less than 50 per cent edible vegetable oil, and the sum of the percentages of oil and egg yolk is not less than 78.' " [6]

In order to obtain a better understanding of mayonnaise it is essential that we have some knowledge of the nature of an emulsion, the method of obtaining one, the different types of emulsions and the means of distinguishing between them.

An emulsion is a heterogeneous system consisting of a liquid dispersed in another liquid [13], and mayonnaise is an excellent example of an emulsion in which the oil is dispersed as tiny globules in a continuous layer of water plus an emulsifying agent. [11]

Milk is a good example of a natural emulsion, although it is not a perfect one, for the cream rises to the top in a few hours. The fat globules are lighter and therefore rise. We make use of this fact when we use a separator or a centrifuge which hastens the rise of the cream and also when we use deep pans instead of shallow ones for milk; because the larger the fat droplets the lighter they are and the more readily do they enmesh the smaller ones as they rise. [16]

Homogenized milk or cream, that is, milk or cream which has been forced under high pressure through small tubes against a solid surface in order to break up the globules of fat into one-tenth to one-hundredth of their original size, is more stable than ordinary milk. When the fat in the milk or cream is thus broken up into minute globules, the surface area of the fat globules is increased and there is a greater deposition of protein around each one of the fat globules, resulting in a more viscous fluid or semifluid and a more stable emulsion. [13]

Investigators have found that a stable emulsion, that is, one which will last for several weeks or years, can be prepared with 1 to 2 per cent of oil in 98 to 99 per cent of water. If more than this proportion of oil is present, a third substance is necessary to the formation of a stable emulsion.

When we mix and beat two liquids which are naturally immiscible (example, oil and vinegar), one liquid will be dispersed in the form of small globules in the other liquid. An emulsion produced by

mechanical agitation of two pure, incompletely miscible liquids is always unstable, because the circumference of the droplets represents a greater surface; the drops of dispersed liquid therefore coalesce upon contact.

If a stable emulsion is to be formed, the films of the enclosing liquid which separates the drops must be stable. The presence of an emulsifying agent deposited around the droplets stabilizes the film around them and prevents the coalescence of the drops. [13]

Hence, three ingredients are essential to the formation of a stable emulsion: the two liquids which must be immiscible, or nearly so, and an emulsifying agent.

TYPES OF EMULSION

There are two types of emulsion:

1. The oil in water type, in which tiny globules of oil are dispersed in a continuous layer of water. Examples: mayonnaise, milk [7], cake batter, cream puffs, some sauces and gravies.

2. The water in oil type, in which divided droplets of water are suspended in or surrounded by oil. Examples: cold cream, lubricating greases, etc. [7]

The factors controlling each type of emulsion are:

1. The nature of the emulsifying agent.
2. The relative volumes of the two liquids.
3. The mode of agitation.

The emulsifying agent may be a substance which is soluble in one liquid but not in the other, or it may be an amorphous, finely divided, or powdered substance which is insoluble in both liquids (example: paprika). [13]

The following substances act as emulsifiers because of their power to help form protective films around the oil droplets: egg albumin, egg yolk, whole egg, gelatine, starch, gum arabic, tragacanth gum, mustard, paprika, sucrose, and dextrose. [11]

"The distribution of the phase [i.e., oil in water or water in oil] has been believed to be unerringly predictable on the criterion of wetting or solubility; the liquid best wetting or dissolving the emulsifying agent being the dispersing fluid." [13] In other words, if the emulsifying agent is more soluble in water than in oil, the water becomes the continuous phase, or, if the emulsifying agent is wetted

more by water than by oil, the water becomes the continuous phase. When the tension on each side of the film or emulsifying agent is the same, no emulsion is formed. "In the light of recent work, however, this rule has been found to fail in certain cases, since the distribution of phases is influenced by the volume ratios of the two liquids, by the manner of mixing and agitation, and by their chemical nature as well as by the nature of the emulsifying agents. Gelatine and albumin give, in general, oil in water emulsions." [13]

The influence of volume ratios of the two liquids may be illustrated by the inversion of emulsions of olive oil in water (sodium soaps as emulsifier). By alteration of the volume concentrations it was found that 91 cc. of olive oil with 8 cc. of water and 1 cc. of 1/5 normal alkali solution form an oil in water emulsion as do all higher proportions of oil and water; 90 cc. of oil with 9 cc. of water and 1 cc. of 1/5 normal alkali solution form an oil in water emulsion as do all other ratios below this proportion. It is believed that if the oil had been added gradually a larger proportion could have been used and yet an oil in water emulsion would have been obtained. [13]

This has been demonstrated by intermittent beating which increases the amount of oil that can be added to the egg; 5.5 cc. of oil is the largest amount of oil that can be added to 10 cc. of egg yolk at one time when beating is continuous. When a ten-second period of beating was broken by a fifteen-second rest period, 6 cc. of oil could be added to 10 cc. of egg yolk. When the rest periods were 25 seconds, 6.5 cc. of oil could be added to 10 cc. of egg yolk. [11]

METHODS OF DISTINGUISHING BETWEEN OIL IN WATER AND WATER IN OIL EMULSIONS (DROP DILUTION METHOD)

1. If water is stirred with an oil in water emulsion on a glass plate it will mix readily, but if it is stirred with a water in oil emulsion it will not mix because the water is in globules surrounded by oil and the water to be stirred in cannot reach it. [5, 13]

On the other hand, if oil is stirred with an oil in water emulsion it will not mix for the same reason, but if it is stirred with a water in oil emulsion it will mix. [5, 13]

2. Sudan III is a red dye soluble in fat but not in water. Consequently, it will spread and dissolve in a water in oil emulsion, but not in an oil in water, because it cannot reach the oil particles. [5, 13]

PREPARATION OF MAYONNAISE

Some recent directions for the making of mayonnaise stress the addition of acid to the egg before any oil is added; others stress adding oil and vinegar alternately, little by little. Bancroft says that experts can add the ingredients in any order—all at once or in separate portions, hot or cold—and mayonnaise always results. [2]

The following time schedule has withstood creditably many tests in the making of mayonnaise:

Add the vinegar, salt, mustard, and pepper, mixed together, to the slightly beaten egg yolk, and beat one minute. Add two teaspoonfuls of oil and beat for one minute. Add two more teaspoonfuls of oil and beat for one minute. Add four teaspoonfuls of oil and beat for one minute. Rest for one-half minute. Add four teaspoonfuls of oil and beat for one minute. Add two tablespoonfuls of oil and beat for one minute. Rest for one minute. Add the last one-fourth cup of oil and give a final two-minute beating. The entire process requires eleven and one-half minutes. [15]

An expert in mayonnaise making can shorten this schedule by the addition of larger quantities of oil toward the end of the process—but even an expert must beware of haste in the beginning. [15] Failure at the beginning may be forestalled by the addition of about two tablespoonfuls of previously made mayonnaise to the vinegar, salt, mustard, pepper, and egg yolk before any oil has been added. Following this precaution addition of oil may be increased in amount and the time greatly shortened. After an emulsion is formed, additional quantities of oil are very easily emulsified.

Curdled mayonnaise may be redeemed by beginning again with a fresh egg yolk and adding small amounts of previously made mayonnaise to the egg yolk before adding gradually the curdled dressing. [15]

Effect of Temperature. Experiments show that the factor of temperature has been given undue weight. The important consideration is that the temperature of the two ingredients be the same; i.e., both at room temperature, both liquids cold, or both liquids at a higher temperature than those already mentioned. In the commercial manufacture of mayonnaise the temperature of the rooms is kept at 65° to 75° F. [1, 11] In general, a rise of temperature makes the emul-

sification easier, because the liquids are less viscous, or, in other words, thinner, and the interfacial tension is less. [5]

Proportion of Ingredients. It is impossible to give exact or even approximate ratios of oil, water, and egg which will be correct for all kinds of mixtures of mayonnaise. The kind of oil, the condition of the egg or other emulsifying agent used, and the presence of thickening materials influence the ratios. [7]

Kinds of Oil. The amount of oil that can be emulsified in a given amount of egg yolk is influenced by the amount of water present in the various types of oil. Fifteen and one-half grams of egg yolk will emulsify the following quantities of oils [11]:

296 grams pure Italian olive oil	441 grams Spanish olive oil
344 grams pure California olive oil	432 grams Wesson olive oil
399 grams pure Mazola olive oil	450 grams French olive oil

Eggs in Emulsion. The age of the egg used affects the quality of the emulsion formed. This is probably due to the decomposition of some proteins. [16] Frozen egg yolks make a good product that remains stable for several months. [11] Dried egg yolks are never used, because the dried product has a tendency to become rancid. A knowledge of the average composition of the egg white and egg yolk helps one to a better understanding of the greater emulsifying power of the egg yolk. [11]

Composition of Egg White	Per Cent	Composition of Egg Yolk	Per Cent
Water	86.2	Water	49.5
Fat	Trace	Fat	18.0
Lecithin	Trace	Lecithin	11.0
Protein	12.7	Protein	14.5
Dextrose	5.0	Dextrose	0.3
Ash	6.0	Ash	1.0

Egg yolk is itself an emulsion containing 30 per cent fat. For this reason it has four times the protective power of egg white. [5] The whole egg requires ¼ cup more oil than the egg yolk alone, but there is no appreciable difference in color or flavor whether the egg yolk or the whole egg is used. Egg white requires only one-half as much oil as the whole egg to make a dressing of the same consistency. Mayonnaise made with egg white becomes thick and lacks smoothness when it is allowed to stand.

Other Emulsifiers. Recent experiments show that ¾ tablespoonful of starch paste or ¼ tablespoonful of gelatine solution may be used instead of egg yolk in making mayonnaise. However, if the gelatine solution is used, the dressing must be kept cold in order to maintain an emulsion. [16]

Acid Ingredients. These may be distilled vinegar, malt vinegar, tarragon vinegar, or cider vinegar, or lemon juice, citric acid, lactic acid, tartaric acid, or a combination of various vinegars and other edible organic acids.

Unthinned mayonnaise is stiff because the oil droplets, covered with a film of egg, rub one another closely, giving them a tendency to adhere or cling together. When a little vinegar is added this tendency to hang together is lessened and the vinegar flows between the oil droplets, thus producing a thinner consistency. [7]

After mayonnaise has been prepared it should be allowed to stand for 5 minutes to one hour. This is the time required for the complete diffusion of the emulsifying agent to complete the viscous film essential to the stability of the emulsion. [13]

De-emulsification or Breaking of Emulsion. De-emulsification is caused by the wrong proportion of oil, vinegar, and egg or other emulsifying agent. For a permanent emulsion these ingredients can be varied only within fairly narrow limits, and still remain a permanent emulsion. [7, 13] If the oil is added too rapidly, the oil globules remain large because they have not been properly broken into tiny droplets. The protective film is less strong. The result is a dressing of thin consistency and little permanency. [7]

Too vigorous agitation defeats its purpose. It causes the water, as well as the oil, to break up into fine droplets and thus the water phase, which must be continuous for success, becomes a divided phase like the oil. Hence a proper emulsion cannot be formed. As a result the oil droplets reunite after being broken up because they are not properly coated with egg or other emulsifier, since this emulsifier is dissolved in the water portion. Intermittent agitation reunites the water droplets readily as there is no film holding them apart, but the oil droplets unite very slowly. [7]

Liquids and gases expand when heated and contract when cooled. The amount of expansion or contraction for a fixed change of temperature is called the coefficient of expansion and varies for different

liquids. The coefficient for olive oil is greater than that for water (.000721 for olive oil, and .000207 for water), which means that when the temperature changes the oil will expand or contract more than the water. This causes forces to be set up in the emulsion which break the protective film and force the oil droplets to unite, thus breaking down the emulsion. [7]

When mayonnaise is cooled to a temperature below 39° F. the oil droplets contract more than the water surrounding them. This reaction alone has a tendency to break up the emulsion. After the temperature of the emulsion reaches 39° F., water begins to expand. This aggravates the state of affairs greatly, so that by the time the freezing point is reached the emulsion is likely to be completely broken. When the mixture thaws, the oil and water seem to change places. [7]

The addition of pickles may break the emulsion. [7] One per cent of salt reduces the size of the oil droplets and gives a thicker consistency. A larger amount of salt causes the emulsion to break down. [7]

Evaporation of moisture from the surface of the mayonnaise causes the protective film of egg or other emulsifier to become brittle and break, allowing the oil droplets to flow together and a layer of oil to form on the surface of the mayonnaise. [7]

The emulsifying agent may be destroyed by spoilage or by the addition of some substance which dissolves it. Vibration also causes de-emulsification. Therefore, manufacturers of mayonnaise equip their trucks with special springs to reduce shock in transportation. [13]

Spoilage of Mayonnaise. Mayonnaise dressing and similar products are subject to rapid deterioration because of their high organic content. Experimentation has shown that this type of spoilage is a process of fermentation which results from bacterial action. Lactic acid is valuable as a preservative: first, because this acid is not harmful to health; second, because an adequate amount of it does not alter the taste of the mayonnaise, as would vinegar used in sufficient amounts to arrest bacterial development. It was found that at least 1.75 per cent acidity (expressed as lactic acid) was necessary to prevent bacterial deterioration of the product over a period of five months. [9]

Mayonnaise salad dressing not only brings out the flavor of food

used in salad combinations, but also acts as a basis for many of our popular dressings such as sauce tartare, Russian dressing, and Thousand Island dressing.

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NEW STUDIES IN EDUCATION

SCHOOL PROVISION FOR INDIVIDUAL DIFFERENCES *

POLICIES AND DATA NECESSARY

THIS study presents a series of policies, more than six hundred in all, which relate specifically to the placement, adjustment, and progress of practically every type of individual attending the public schools. From an analysis of these policies data have been obtained which make possible the carrying out of the suggested individual adjustments and which, at the same time, give the superintendent a basis for determining the extent to which the adjustments needed have been made.

The policies collected and evaluated are those which indicate the type of individual for whom adjustment should be made, and the specific adjustment needed. The necessity for adjustment may be due to any one or more of a variety of causes. Mental or physical traits, chronological age, financial needs, and social abilities are only a few of those included. The type of adjustment demanded ranges all the way from exclusion of children to a specific adaptation made by the teacher within the classroom.

Suggested policies were obtained first from educational literature. Magazines, books, yearbooks, bulletins, and superintendents' annual reports known or thought to deal with the problem were canvassed, as were all available school surveys, and, also, more than one hundred unpublished dissertations and theses from universities which have outstanding departments of education and psychology. All suggested policies found in this entire body of literature were listed, and later assembled according to type.

The author then visited eighteen eastern and midwestern cities for the purpose of observation and conference. The superintendents and persons designated by them or their immediate assistants as most competent in each field of inquiry were interviewed. Policies already formulated received careful criticism at the hands of these people and other policies were suggested. Note was taken of those operating to the satisfaction of the school staff.

The policies presented, it is thus seen, are based on such expert opinion and scientific evidence as were reasonably obtainable. They have an immediate value as guides to administrative procedure. Their usefulness will certainly be enhanced if they are constantly modified as other and more reliable evidence becomes available.

It is evident that the policies also have value as a basis upon which to build a system of child accounting. Since most facts that are gathered about pupils are

* By Knute Oscar Broady, Ph.D., Teachers College, Columbia University, Contributions to Education, No. 395.

assembled for the purpose of better adjusting the school to them, it is logical that the suggested adjustments should be analyzed to determine the data that are necessary to child accounting, when these data should be recorded, and concerning whom they should be obtained. Such an analysis has been made. One thus has the information necessary for drawing up the records and reports for a system of child accounting on which the necessary pupil data may be most economically recorded and preserved, and from which they may be most readily obtained. Using the information provided by records and reports thus formulated the school may be properly adjusted to the child and, conversely, the extent to which adjustments have been made may be determined.

SCHOOL ADMINISTRATION AND SUPERVISORY ORGANIZATIONS IN CITIES OF 20,000 TO 50,000 POPULATION *

THIS is an analytic study of present practice in school organization. The organizations in 22 Massachusetts cities are compared with organizations in 163 cities outside of Massachusetts. The total number of school systems involved in this study is 185, drawn from 37 states. Each of the city school systems is studied for:

1. The administrative and supervisory organization.

2. The number and kinds of positions in the organizations.

3. The number of employees in those positions.

The data were obtained partly through field work in which the investigator visited school systems, and partly through a questionnaire. Data for the 22 Massachusetts cities and the 163 cities outside of Massachusetts were treated in two separate groups. The relationships between number of pupils and number of classified employees and the interrelationships among classified employees were determined by statistical method.

SOME OF THE FINDINGS AND CONCLUSIONS

1. There is a wide diversity of practice regarding the status of the superintendent of schools as an executive officer.

2. The powers of boards of education are, without exception, powers delegated by the state through acts which embody the principle of delegated legislation.

3. Cities do not possess a "right to home rule in education."

4. The superintendent of schools is an officer of the local board of education and is at the same time an officer of the state.

5. Most of the powers of the superintendent of schools are powers delegated by the board of education and may be modified by the board of education.

6. Superintendents of schools have little knowledge of what proportion of their time they devote to problems of administration and to problems of supervision.

7. The range in per cent of their time that superintendents in 22 Massachusetts cities estimate that they devote to problems of supervision is from 20 to 80.

8. There is a tendency toward an increase in the per cent of fiscally independent school systems.

9. Seventy per cent of the cities, exclusive of the 22 Massachusetts cities,

* By William C. McGinnis, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 392.

are fiscally independent. Fiscal independence of school systems does not exist in Massachusetts cities.

10. There is a business agent or manager of business affairs who is directly responsible to the board of education in 22 per cent of the cities exclusive of the Massachusetts cities, and in only one of the Massachusetts cities.

11. The average number of supervisors in each group of cities is too small. The same conclusion is reached in regard to school nurses, attendance officers, and administrative office employees.

12. In Massachusetts cities, and in cities outside of Massachusetts, the relationship which exists between number of pupils and number of supervisors is a haphazard one.

13. There are ten factors which determine the organization of city school systems.

14. The 14 organization charts included in this study will serve as patterns for administrative and supervisory organizations and can be used as bases of study and comparison for improving city school organizations.

TRAINING IN HIGH SCHOOL MATHEMATICS ESSENTIAL FOR SUCCESS IN CERTAIN COLLEGE SUBJECTS *

WITH ESPECIAL REFERENCE TO PHYSICS

THE purpose of this study was to determine what training in high school mathematics is essential for success in certain college subjects that do not presuppose a knowledge of college mathematics. "Training in high-school mathematics" is interpreted to include the various outcomes from the study of algebra, geometry, and trigonometry, such as facts, concepts, skills, general processes, and methods of procedure.

PROCEDURE

The text entitled *Physics, A Textbook for Colleges*, written by Oscar M. Stewart has been used as the basis of study in making the following investigations:

1. The mathematical vocabulary used has been determined by a careful word count throughout the entire text.

2. The symbolism employed in the text has been tabulated, and compared with that used in four other texts in freshman physics, and with five texts in freshman chemistry.

3. By means of an intensive study of the entire text, including the complete solution of the five hundred seventy-two problems presented, the facts, concepts, skills, general processes, and methods of procedure which are used have been analyzed and tabulated. Two hundred twenty-one of these facts and skills are listed, showing the frequency of occurrence and the pages upon which they are found. Twenty-two general processes and methods of procedure are listed, with an illustrative problem quoted from the text for each one.

4. From the lists of algebraic manipulations, eighteen problems have been selected to constitute a test. The results of giving this test to eight hundred fifty-nine high school pupils who had studied algebra for at least three semesters have been tabulated and discussed.

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FINDINGS

1. The word count indicates that certain concepts should be given additional emphasis. Among these are: constant, variable, axis, rate, maximum, minimum, and the series of words connected with variability and proportionality.

2. College subjects dealing with quantitative data make use of an extensive symbolic language quite different from that used in high school mathematics. Greek letters or initial letters (either capital or small) with primes or subscripts are used in preference to the customary x, y, z, a, b, and c of algebra.

3. The arithmetic computations are much more complicated than the types of computation now advocated for courses in arithmetic.

4. There are comparatively few geometric facts involved in the subjects investigated, and these are the more simple and fundamental facts upon which ample drill is usually given in high school.

5. The ability to make scale drawings involving the use of the protractor is essential.

6. The frequency of the four fundamental operations with standard form numbers in expressing large and small numbers justifies the emphasis of this phase of the theory of exponents in high school.

7. No complicated polynomials, parentheses, fractional equations, radicals, or complicated cases of factoring are found in the texts examined.

8. The general quadratic equation does not occur in Stewart's text. It occurs but rarely in the other texts, and when it does it is not in a factorable form.

9. The customary form of simultaneous equations of the first degree does not occur, but the more unusual form with fractions does occur frequently in the study of lenses and mirrors.

10. Among the general processes and methods of procedure which are illustrated and discussed, the following are typical:

a. The critical reading of the problem in order to get the exact meaning.

b. Rough checking of the answer to see if it is reasonable.

c. Reduction of data to the proper unit of measure by means of a known ratio before substituting in the appropriate formula.

d. Translation of a verbal law or definition into a mathematical formula.

e. Use of a verbal rule as a stimulus to a process carried on in imagination.

f. Discarding of irrelevant data.

g. Diagrammatic representation of the relationships between quantities and forces.

11. A study of the results of the test shows the average number or "corrects" on eight hundred fifty-nine papers to be 6.8 out of a possible eighteen. Inability to interpret relationships of letters in formulas, confusion of capital and small letters, confusion of subscripts and exponents, inexperience in solving for a ratio and a reciprocal, failure to check results roughly, and carelessness in leaving a letter in the expression of the value of that letter were among the factors contributing to this low average.

SAFEGUARDING SCHOOL FUNDS *

LARGE sums of public school funds are lost annually due to dishonesty, mismanagement, bank failures, and similar causes. This study analyzes the causes of these losses and points out which measures should be taken in order to avoid future losses. Twenty-one specific cases of school fund losses are cited and analyzed in one chapter of the report.

That school funds are being lost is not at all surprising when one studies the problem of safeguarding them. The public school funds handled during the course of a twelve-month period exceed $3,000,000,000. The officials responsible for the care and custody of these funds are occasionally unscrupulous, and more often not fitted by training or experience for their duties, since many of them are elected to their offices by a vote of the people instead of being appointed because of their ability. In addition, the administration of the school funds is controlled by legal enactments, many of which are in serious need of revision if the funds are to be properly handled. In general, it may be said that a well formulated program for safeguarding public school funds has not yet been established.

This study did not reveal a great number of losses due to dishonesty, considering the possibilities, but sufficient evidence was gathered to indicate the need for establishing safeguards against dishonesty. One entire chapter of this report is devoted to a discussion of surety bonds for bonding the individuals responsible for the proper handling of the school funds. The limited value of personal bonds compared with the value of corporate surety bonds is emphasized. This study revealed that the state laws relating to the use of surety bonds are, in general, very lax and inadequate, and need revision. The author points out the shortcomings of the present laws and indicates changes that should be made.

Bank failures are a major cause of school fund losses. One chapter of the report is devoted to safeguarding school funds in depositories. It is amazing to learn that more than 5,000 banks suspended operations during the eight-year period 1921-28, inclusive. These bank failures were analyzed from the standpoint of location, size, class of bank, and relation to the Federal Reserve System. The provisions for protecting the school deposits in the event of bank failures were gathered for each state in the Union. Twenty-six states require the depositories to furnish security for the school deposits, in the form of personal bonds, depository bonds, or collateral. Of the twenty-six states sixteen permit the use of personal bonds, all permit the use of depository bonds, and twenty-one permit the use of collateral. Personal bonds were found very undesirable as security for the deposits. Depository bonds furnished by corporate surety companies are considered superior to collateral but the latter may be considered satisfactory if certain suggestions mentioned in this report are followed. In a number of states the public officials who deposit the school funds in the banks are liable on their official bonds for any losses due to bank failure. Eight states have attempted to protect deposits by establishing a "Guaranty Fund," but this plan has proved a failure in every case.

* By Henry Harold Linn, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 387.

Auditing, accounting, budgeting reporting, and publicity are other topics discussed in this report, and although they receive only brief mention, their importance in a program for safeguarding school funds is not minimized.

In conclusion it may be stated that although large sums of school funds are being lost at the present time, these losses are largely preventable if proper means of safeguarding the funds are established and observed. These means are suggested specifically in this study.

TEACHERS COLLEGE *in the* NEWS

COMPILED BY CLYDE R. MILLER
DIRECTOR, BUREAU OF EDUCATIONAL SERVICE

Dr. Briggs Attacks Secondary Education in the United States

Dr. Thomas H. Briggs delivered the Inglis Lecture on Secondary Education at Harvard University, January 9. The newspaper accounts of this lecture were of unusual interest and provoked wide discussion which was heard wherever school people gathered together. It was seen in newspapers and magazines; it was found in newspaper columns containing letters from readers. Most of the newspaper quotations were verbatim. Naturally, the newspapers printed but scattered excerpts from the address which, in its entirety, made more than 130 typewritten pages. The address has been published in book form by Harvard University Press (Price, $1.50). The essence of much of Dr. Briggs's attack on secondary education is included in the following story from the *Boston Post*:

A sensational arraignment of educational methods employed in schools—both public and private—was made last night by one of the foremost authorities in the country, Dr. Thomas H. Briggs, a professor at the Teachers College of Columbia University.

His startling statements, made in a lecture at Harvard University, concluded with the charge that "State's attorneys in most American communities might conceivably present against educational authorities indictments for misfeasance in office and the misappropriation of public funds."

Dr. Briggs made it clear that the views he expressed were his own and that he was not speaking for the Teachers College or the university he is affiliated with. "If any parts of my address prove unpopular," he said, "the blame is mine and mine alone."

His statements created tremendous interest among the educators at the Harvard Graduate School of Education, where Dr. Briggs was giving the annual "Inglis Lecture" at Emerson Hall.

While he said that our schools have already contributed to society more than all other agencies combined, Dr. Briggs said that they have failed to return the maximum good for the millions the State has spent and is spending on them.

There are three counts on which indictments might be based, Dr. Briggs said.

"First," he said, "the authorities have made no serious efforts to formulate for the secondary schools a curriculum which promises maximum good to the supporting State.

"Second," Dr. Briggs said, "there has been no respectable achievement, even in the subjects offered in the secondary schools, poorly chosen as they are.

"And third," he summarized, "no effort has been made sufficient to establish in students the appreciation of the values of the subjects in the curriculum such as to insure continued study, either in higher schools or independently, after compulsion ceases."

Discussing the first count of his "indictment," Dr. Briggs said that the continued efforts to make scholars of all results in the waste annually of millions of dollars of the public money, wastes

precious time and deludes youth into a false sense of possession which the world must correct.

"A 70 per cent achievement in mathematics—a passing grade in most schools," Dr. Briggs said in support of his second count of the indictment, "is not respectable. In business it would lead soon to bankruptcy or to the penitentiary."

And the salient feature of the third count, Dr. Briggs said, is the well known fact that "large numbers of men and women leaving school drop with relief and finality all concern with subjects to which they have devoted months and even years of time."

"In this failure," he said, "the educators have squandered the public investment and have weakened the State.

"Education is a serious business, a business vital for social welfare. It is a great public investment—the most important the State can make. It should be made to pay assured dividends. When there is a general conviction on this fundamental matter, a conviction so real that it eventuates in action, everything else will follow in due course of time. Unless there is this conviction, progress will be slow, uncertain and more or less fortuitous.

"Guidance must be a more important part in the new programme. By that I mean that the student must be treated individually. The programme must be found for him which will bring out his aptitudes and in the end prove of more value to him.

"The nation is wasting millions upon millions of dollars on an ineffective system of education. It is defeating its own ends. It is investing the money without getting dividends."

Private schools, the educator declared, are potential breeders of destruction to the State. He urged State supervision of the private schools and their teachings.

"Students in these private schools," he asserted, "may be taught history which ridicules national heroes and places on a pedestal those who have carried the flag of hostile philosophies—economics which, in our judgment, undermines our entire social structure, literature which inculcates ideals subversive to those which guide our conduct, and music which promotes loyalty to alien lands and rulers.

"No institution that influences the youth who will soon be citizens should be permitted by the State to be wholly independent. Such schools give their students a sense of superiority over the masses.

"Private school students have lost, or have never acquired, a faith in democracy and a genuine understanding of sympathy for the common man.

"Even those private schools maintained under religious auspices would be found bankrupt educationally by any competent audit."

Dr. Briggs declared that there are more than 20,000 splendidly equipped high schools in the United States and that they are attended by more than 4,000,000 pupils.

And although the public wants education—"almost regardless of what it is"—neither the educators nor the public have grasped the fundamental meaning of education, Dr. Briggs charged.

The proper way, he said, is for the State to invest money in education for a profit. The result of that investment, he said, should be educated youth better disposed to contribute to the betterment of the investor—the public.

Discussing the question of equal educational facilities for all, Dr. Briggs said that it is but a theory, because, in fact, the children of the higher social or economic classes remain in school longer and in greater proportional numbers.

Criticising what he termed the tendency of teachers to administer higher academic learning to all students, Dr. Briggs said that only the few students competent to acquire such learning should be selected and encouraged.

"The wastefully continued effort to make academic students of all, or even of the majority of students," Dr. Briggs said, "is fair to neither class."

Even the blame for crime was laid at the door of the "poor" high schools and private institutions of learning. To remedy the secondary educational school system, he said, would be to "strike at the heart of crime."

"Most crime," he said, "would disappear if there were high schools adequate to meet the needs of the United States of today and tomorrow."

A sweeping and revolutionary change, he said, is needed in the entire secondary school system of the country. Much money is needed and suitable teachers must be employed, Dr. Briggs declared. "One good teacher," he asserted, "is worth a platoon of policemen."

Editorial reaction to Dr. Briggs' indictment was immediate and nation-wide. The *Boston Herald* said:

If Prof. Thomas H. Briggs of Columbia left anything unsaid in his devastating criticism of American public and private schools at Harvard University Thursday evening, it must have been for lack of breath or of time. Dr. Briggs has had a long and active career in the field of education, teaching in the classroom, preparing teachers at normal schools, analyzing various public school systems, serving on committees of the National Education Association, and writing pedagogical books and pamphlets. Apparently all the anger at stupid teachers and all the contempt for shallow, ineffective methods and customs which he has stored up within himself during the past thirty years he allowed to flow forth in one vitriolic outburst. So complete is his arraignment that one hesitates to take issue with him on any point, although convinced that things can't be quite so bad as Dr. Briggs asserts.

Dr. Briggs did well to include a sturdy blow in the direction of the private schools. These establishments, sometimes the money-making enterprise of an individual and sometimes tradition-bound institutions controlled by a dormant board of trustees, usually escape criticism when brickbats are being thrown. . . . Free and independent institutions need such challenges occasionally, lest they slip into easy-going habits which endanger their right to independence.

Heads of the private schools conducted as part of Teachers College were interviewed by the New York papers following the news stories from Boston. Dr. R. G. Reynolds, principal of the Horace Mann School, was quoted as saying: "Dr. Briggs proposes to nationalize children just as is being done in Russia. He wants to return to the Spartan state where all children belong to the state. Sparta's modern exponent is Russia." Dr. J. H. Newlon, principal of Lincoln School, declared he was not ready to agree with Dr. Briggs that private schools should be abolished. He held the right to maintain private schools as necessary to safeguard academic freedom. The *Brooklyn Eagle* commented:

A number of Dr. Briggs' colleagues on the faculty of Teachers College have taken pains to oppose publicly and promptly the view attributed to him. Among their opinions the outcry against abolition of private schools as a bolshevistic proposal expresses a sense of emotional shock at an idea that traverses the social basis of the Nation. But this outcry is more than a mere emotional exclamation. It carries the implied criticism that the plan to turn school education into a State monopoly clashes with our whole system of individual responsibility in the citizen. You cannot hold a citizen responsible for his part in popular government if he is necessarily and by law a mere creation of the State that he is supposed to govern.

Ann Story, writing in the *Manchester* (N. H.) *Union* and other papers receiving her syndicated editorial, reviewed at length the Briggs indictment of secondary education and added:

Whether one agrees or disagrees with Dr. Briggs, there should be a feeling of satisfaction that such things at least can be discussed openly and if evils exist remedies can be sought. The sacred aura that for so long surrounded schools and educators has been wafted away on the sound waves of criticism that have

been set in motion from one end of the country to another. The results may in time be beneficent.

The *New York Times* declared editorially that Dr. Briggs had developed a fundamental thesis which might shock the sentimental and complacent, and disturb also the practical and the critical. Said the *Times*:

This thesis is in response to the questions why the State should provide free public education. The answer is that "the State supports free public schools to perpetuate itself and to promote its own interests." The corollary is that education is "a long-term investment" that the State may be "a better place in which to live and a better place in which to make a living." This seems a simple principle, but its implications and applications would give direction to reforms which in their perfection would be revolutionary.

Other editorial comments were:

It is, of course, the privilege of a group of avowed experimenters of the nature of those who compose the Teachers College staff to be as radical as they like. Most of their ideas are sound theoretically but they look so far ahead and are so scornful of a step-by-step progress that they are practically useless except as bases for academic discussions. . . . Prof. Briggs is . . . theoretically right when he attacks the high schools for continuing antiquated, traditional curriculums which seek to make academic scholars of all. His implied remedy is a complete change of curriculum, an ideal which many educators are already looking forward to, but which can only be reached gradually over a long period of years.

The professor is right, but in making such sweeping assertions he alienates rather than attracts the sympathy of the masses who have the ultimate decision in public education.—*Waterbury* (Conn.) *Republican.*

Professor Briggs is not entirely correct, by any means, in his sweeping condemnations. . . . But when he calls the English education of high school boys and girls of today "shocking" he comes shockingly close to the bull's-eye.—*Danbury* (Conn.) *News.*

When Dr. Briggs advocates the abolition of private schools he is getting onto dangerous ground. He is at least suggesting circumscription of a constitutional right on the subject of education.—*Binghamton* (N. Y.) *Sun.*

Professor Briggs uses strongs words and yet it must be said that he has voiced sentiments which have for some time been growing in various parts of the United States.—*Long Branch* (N. J.) *Record.*

The Briggs stand assumes a state right in child training that is not generally upheld by leaders in higher education, who believe that the private school acts as a safeguard against primary and secondary educational control for political or other selfish purposes. . . . That comparatively few students go to private schools is, of course, a tribute to the efficacy of the public schools, but it is also evidence that there is a considerable enjoyment of the American principle of free action in matters of parental responsibility.—*Indianapolis* (Ind.) *News.*

Irrespective of the merits or demerits of private schools, the American people are not likely to abolish them, as has been suggested by Dr. Briggs. . . . There is great merit in educational standardization in some of its better aspects. Owing to the limitations of mankind, there are also defects and possible dangers in it. What constitutes education is not definable with absolute exactness. Experts are daily disagreeing over it, both as to its purpose and as to its details.—*Charleston* (W. Va.) *Mail.*

The question which Americans must face is whether they wish their children to be educated along lines definitely laid down by the state—or whoever controls the state—exactly as the children of

Soviet Russia are educated today—or whether they prefer to have them taught the truth, according to the best light of sincere scholars. It seems a simple proposition.

There may be errors and shortcomings in both public and private education in the United States but wholesale condemnation like Dr. Briggs' is twaddle—plain unvarnished twaddle.—*Plainfield* (N. J.) *Courier-News.*

When will Americans learn to keep their hands off other Americans? If one group of our people wants the exact type of school which Professor Briggs detests most, that group is entitled to it and all the rest of us ought to fight to the death to see that the Briggses don't deprive them of their freedom. We must not let the reformers put American life into any new and more drab straitjackets. We have enough, as it is. —*New York Post.*

Being of the educational cognoscenti, Dr. Briggs should certainly know what he's talking about. Yet there will be many who will take exception to his theory that the government should maintain a rigid censorship of what is to be included in the curriculum of every secondary school in the country."—*McKeesport* (Pa.) *News.*

It is nothing new to hear an educator denounce the nation's system of education. Few have gone so far, however, as Dr. Thomas H. Briggs. . . . A course in temperate speech might not go amiss in teacher-training institutions.—*New York Sun.*

The conservative private schools are in the nature of "control experiments." They enable us to match results and methods with the far more theoretical and experimental public institutions. The vast good that public schools admittedly do is aided by this opportunity of comparison.

Private schools, as the one unchanging factor in the shifting science of education, should be preserved. Their value overweighs all of Dr. Briggs' charges. And there are as many snobs in public schools as in private schools. Snobbery begins at home, and no school will eradicate it.—*Philadelphia Record.*

The demand of Dr. Briggs that all private schools be abolished is futile, since nowhere is there the legal power to order and enforce so tyrannical a measure. Bolshevism or fascism could do it, but not constitutional democracy. —*Chicago* (Ill.) *News & Journal.*

The proposal of Dr. Briggs is reactionary. It would stifle much of progress in education. Private schools are necessary for certain types of students who cannot meet the requirements of the public schools.—*Nashville* (Tenn.) *Tennessean.*

Dr. Briggs Differs from the Pope

A day or two after his Inglis Lecture at Harvard University Dr. Briggs was asked by many newspapers to comment on the papal encyclical on education. He was quoted by the *New York Times* as saying:

The Pope manifests keener insight than the American public in his perception of the importance of education to attain definite and desired ends.

I differ radically, however, from the Pope as to what those ends should be. Seemingly depending on revelation, he believes that children are born in original sin, must be kept in a segregation which is found nowhere else in life and educated for a life after death.

On the contrary, depending on ascertainable facts, I consider children at birth non-moral, their education to follow, not to fight the laws of nature, so that they will be better able and better disposed to contribute to the betterment of society.

I am concerned primarily that they may be developed to live this life successfully. Along with this, but not substituted for it, the Church has responsibilities. Organized society in the United States will never relinquish its right to control education in order that

it may preserve itself and promote its own interests.

If the State were as intelligently active in determining the ends that it wishes to reach through education as the Catholic Church has been, democracy would be on a much surer foundation.

Dr. Thomas Alexander Sees Secondary Education from Another Point of View

Comparisons are indeed odious, it is pointed out by Dr. Thomas Alexander, when they indicate that, broadly considered, European schools excel American schools in practically all respects. "We are visited every day now by European lecturers," declared Dr. Alexander in an article in the *Herald Tribune*, "who feel called upon to belittle American educational effort, although these lecturers have scarcely looked inside the American school or come in contact with American life." In a strong defense of American secondary education Dr. Alexander wrote in the *Herald Tribune*:

A report published by the Carnegie Foundation for the Advancement of Teaching makes a comparison of American and European secondary schools, much to the detriment of the American institutions. While the facts reported in the bulletin are accurate, their interpretation cannot be accepted by students of comparative education. Any comparison of educational results in Europe and America in the secondary school field must consider the purpose of secondary education in America and in Europe.

The sole function of secondary education in Europe is to train intellectual leaders, intellectual leaders being defined as those who can handle abstract concepts skillfully, but taking no account whatever of social, practical or artistic intelligence. All secondary schools in Europe, outside of Russia, are over-intellectualized in harmony with the spirit of the last half century, in which "technology" and "intellect" were the slogans of the age.

The method of training teachers in European countries was and is definitely calculated to select those individuals that university professors call "intellectual," that is, individuals capable of handling abstractions, regardless of however stupid the student may be in other respects. All others, especially those whose talents are in the realm of practical accomplishments or whose strength consists of emotional energy, are ruthlessly eliminated. An intellectual school demands an "intellectualized" teacher, one who knows a great many things and is able to handle intellectual abstractions much as a gymnast twirls his clubs and whirls his wands.

The secondary school in France and Germany has been little concerned with education in its best and broadest sense. The chief function of European secondary schools has been to train so-called intellectualists. We say "so-called" because it is very certain that "intellectual ability" should mean much more than it ordinarily does in its present usage. The European secondary school encourages the intellectual type of pupil only. Those who have other characteristics are not at home in such schools.

Many thousands of boys and girls of artistic and emotional power are almost totally neglected in European higher schools because they find no sympathetic teacher and they meet with pure intellectualism. They either profit little from school or leave it altogether. As one director said, "We haven't time to educate; we must give all our time to the acquisition of facts."

In recent years we have had in our own country several people interested in building up an "intellectual aristocracy." These people issue bulletins on the necessity of making American high schools, colleges and universities exclusive institutions. They announce in public that one-half of the people in college are not fit to be there. They, of course, always assume that they themselves belong to the other half.

Curiously enough, the American people have not been influenced by these

bulletins. It is a well grounded principle of American education that the road should be kept open for all. If our universities were to pursue the European policy of admitting only the "intellectual" type, the people would simply turn around and organize institutions that would concern themselves with the education of all the people.

Because we have not adopted the extreme principle of exclusion of all but intellectual students, our alarmists foresee the decadence of American science, literature and arts. They compare European universities with American universities to the detriment of the American.

When one looks, however, at American life and asks, Do European scientists excel American scientists? Do our inventors lag behind their European fellows? Is American literature less virile and stimulating than that of a typical European country? Are our thinkers in the fields of politics, sociology, economics, business and education less capable? we would have to answer these questions in the negative. In the last analysis, all comparisons of educational systems must be answered by such questions.

While it may be true that our universities and high schools carry more students of inferior ability than European schools, this fact does not exclude students of high ability. It has been demonstrated that we do not lack workers in all fields of endeavor who measure shoulder to shoulder with their European colleagues and in many fields far surpass them.

. . . We have as many fine teachers and as many fine pupils and students as the European countries, but since we have chosen to open high schools to all children, and colleges to almost 1,000,000 students, it has become impossible to find, train and retain proper teaching staffs. Since higher education is restricted in Europe, an adequate teacher supply in the high school and university fields has been secured.

There are two fields of educational effort in which Europe seems definitely to be in advance of us—vocational education and social welfare education. . . .

We have more boys and girls in American high schools between the ages of fourteen and eighteen than are in all European secondary schools put together. Germany, with 70,000,000 people, has 500,000 boys and girls in the secondary schools, while America with 120,000,000 has approximately 4,000,000. Naturally, the American problem demands a different solution. It is not to be expected that the average product of American high schools, which includes all children of high school age, will be as high as a system where only the top 10 per cent are enrolled.

There is no one, however, who can say that the American high school has not furnished the best educated middle class in the world. There is every indication that the American high school has become a part of the American common school and has pushed upward the limits of general education beyond that of any other country. There is every indication, too, that some form of collegiate education will soon be a part of the common school system and not merely a prerogative of the privileged class. . . .

Economic pressure in European countries is so severe that each individual must seek a definite vocation and prepare himself for it. He cannot trust, as does the American, to falling into some pursuit and learning the job after he once has it.

Therefore, one finds a large variety of vocational schools of elementary, secondary, university level in which he can secure a high class type of preparation for a given job. The training is usually long and severe. The supremacy of Europe in many manufacturing fields is due largely to the excellent quality of training secured by the skilled workman in vocational and trade schools.

In America our vocational schools are to be found usually only in large centers. Many of our boys and girls reach adult years without any specific vocational ability, while in Europe each boy is usually qualified to do one trade well. The American boy fails to take advantage of vocational training offered, although the road may be open upward.

He chooses to follow too long the general type of education which does not prepare him definitely enough for any given type of work.

Any comparison of school systems is generally unfair and useless. A school system, after all, must be judged by how well it serves the needs of the civilization for which it is fashioned. We should be very careful in saying that one school system is better than another. The questions should be: Is one civilization better than the other? and, Does its school systems serve it adequately?

American civilization is not the same as European civilization. Our schools must be different. America relies more upon out-of-school education for the development of its citizenship than does Europe. We do not believe so implicitly in the necessity of school. We trust more to the educational effect of life itself upon our boys and girls.

The Boy of Columbia's Dreams Tells Girls Where to Head In

This headline appeared above a news story in the *New York World* which described "an educator's picture of the perfect child." The story was a humorous popularization of a pamphlet quite technical in nature issued by the Bureau of Publications and prepared by Dr. Ruth Andrus, formerly acting director of the Institute of Child Development in Teachers College and at present Director of Child Development and Parent Education in the State Department at Albany, N. Y. The *World* reporter wrote:

An educator's picture of the perfect child is drawn in a pamphlet issued by the Bureau of Publications, Teachers College, Columbia University, on the habits of youngsters from two to five years old to provide parents with a yardstick for measuring the personality of their children. It was prepared by Dr. Ruth Andrus, associate professor of education and former Acting Director of the Institute of Child Welfare Research of Teachers College.

As derived from Dr. Andrus's method of scoring, the perfect child is a curious mixture who comes to school willingly, who knows a funny story when he hears one, who knocks down little girls when they trespass on his rights by snatching his hat, who is soothed by music, enjoys eating, stoically sneers at crying and fears nothing from worms to thunderstorms.

This paragon of juvenile virtue always knows his birthday, never forgets where he lives, hangs up his clothes without being reminded, takes off his shoes by himself before retiring for a nap and fastens and unfastens his own bib. He waits his turn in conversation and contributes ideas of decoration and design. He pretends sometimes that he is a fire engine or a bear, never says "me" when he means "I," sings songs and composes them and remembers the events of the year before.

His motor characteristics are such that he can button and unbutton clothing in the back without any help, can dress and undress by himself and manipulate garters, galoshes, zippers and shoe laces. He can tie and untie a knot and a bow, go up and down the stairs on all fours, walk steadily, run backward, skip on one foot, skip on two feet, gallop, whirl without falling, clap to music, climb on to anything three feet high and jump three feet down without falling.

The perfect child can manage kiddie cars, velocipedes, scooters and bicycles. He can make houses of blocks, paint, manipulate scissors, use a saw, thread a needle, sew on a button, blow his nose and treat a fork with delicacy.

On the social-moral side he is expected to be co-operative, show friendliness, be prompt to appointments, attempt to take care of himself, recognize the rights of others, initiate activities and exercise self-control when crossed. He will always say "please" and "thank you" without urging and voluntarily shake hands if he likes your looks. Being ethical, he puts his hand over his mouth when he sneezes and, being polite, also when

he yawns. The little gentleman accepts punishment without resentment, shows generosity, doesn't try to boss, pinch or tease anybody. He never marks bad words on walls, talks with his mouth full or bites anybody. Finally, he never licks his dish or carries tales to teacher.

Commenting on this, the *New York Post* said:

The perfect child today may be quite the opposite tomorrow. The process of determining his mathematical rating would have to go on forever, for while little Peter might give his toys to his sister during one period of observation, he would be more than likely to pull her hair on the next occasion. And then what would his rating be?

The pundits of Teachers College should remember that of most children it is still true that when they are good they are very, very good, but when they are bad they are horrid. That is one fact in child psychology which has been determined without an inventory of 1,911 questions.

And under the caption of "The Synthetic Child," the *New York Evening World* observed:

That little bit about the perfect child's not having any bad habits, and placing his hand over his mouth when he sneezes, and so on—well, perhaps there have been children this perfect, but we have never seen one.

Still, Dr. Andrus no doubt knows her business, so one had better not take exceptions to her treatise. At any rate, it should be a big boon to parents.

The column in the *Newark* (N. J.) *News*, known as "This Revolving World," contained various observations on the "infant phenomenon," among them these:

This laboratory triumph is the result of patient endeavor running over several years to set down in inventory form just what perfection in a child would mean. It is not to be supposed that Dr. Andrus expects to encounter in the flesh the prodigy her study has constructed, and it may be well that such is not her hope. Nothing in the Elsie Books, the fondest imagining of Mrs. Hemans or Mrs. Ewing, the infant fruit of the Sunday school libraries of the seventies, even the gifted mother of Pollyanna herself could ever have portrayed such an unmitigated pest as the Andrus Perfect Child stands forth, revealed. Contemplating its perfection the average parent realizes once again the basic grandness of science.

. . . . . .

If Angelicus is considered as a boy he is virile and instinct with initiative; if little girls infringe on his personal rights by snatching off his hat he knocks them down and goes on about his business. If the subject be Angelica she never addresses adults unless spoken to first, and never by any chance says "It is me." Angelicus, on the other hand, can steer a scooter with consummate skill, can construct a block house that is an architectural marvel, and never cuts his fingers with the scissors while cutting pictures out of Father's first impression etching collection. His parents never have to remind him to say "Please" and "Thank you." Both Angelicus and Angelica put their hands over their mouths when they sneeze or yawn. Angelicus would rather die than pinch a little girl where the pinching is excellent.

Must we continue? It seems obligatory, though difficult. Angelicus never writes naughty words on walls or fences, never speaks with his mouth full, with rare self-restraint he will not bite anybody he does not like, he cannot bring himself to lick his dish, and to cap the climax will not carry tales to teacher. Both Angelicus and Angelica are competent to dress and undress themselves, even to leggings and arctics. Both also know the functions of the handkerchief and apply their knowledge. Neither grabs for things at the table or rushes through food so as to be first for a second help. Neither tracks mud into the house or loses one mitten on the way home from school.

There seems nothing to be done about

Angelicus and Angelica except to drown them before they open their eyes.

Student Artists Abandon Routine Formulas

According to Professor George J. Cox of Teachers College, sponsor of an exhibit of 124 paintings on view at the College, art rather than artifice should be the key-word of instruction in painting. Students from various states in the Union and others from foreign countries had paintings in the exhibit which, according to the *New York Times*, will be shown at several American colleges beginning next fall. The following is part of the *Times* account of the exhibit:

The tempo of the city has been caught in impressionist studies by R. M. Acker and D. McIlvain. The first depends for its effect on a confused juxtaposition of skyscrapers, ships and bridges, with hurrying clouds overhead. These are crowded into sections which are repeated so as to give the picture an effect of revolving motion. The second conveys an impression of the city through its buildings and subways.

Bertha Kraus, another student artist, is represented by two lithographs, one called "High Yellow" picturing a mulatto girl, and the second called "Smoky Sheik" picturing a young negro in the gaudy accoutrements of a circus band master.

There are two cubist paintings, and among the black and white drawings a picture of a voodoo dancer at the climax of her mad whirl is especially interesting.

The new tendency of art instruction to encourage experimentation and personal expression rather than visual reproduction was explained by Professor Cox in a statement for the exhibit which he prepared last week just before sailing for Europe on a sabbatical leave.

"The exhibition here shown gives, without being exhaustive, a fair idea of the work done in the design and painting classes at Teachers College," the statement says. "If to some observers a few of the examples appear unorthodox, it should be remembered that methods of instruction in art today vary widely from old practices. The latter too often stressed only accurate representation and technical facility. Today such qualities are no longer valued unless they are subordinated to the larger demands of art.

"Art as distinguished from artifice calls into play not only the mechanics of the subject but also those finer qualities of thought and feeling that were usually submerged or obliterated by the old processes of teaching drawing.

"The modern artist contends that a photographically accurate copy of a still-life group, a landscape, or a portrait, can tell us only what everyday commonplace vision sees. But an artist's interpretation is invested with a personal quality all its own, as is a poem or a musical composition. This emotional quality in art, as in music or poetry, may or may not strike responsive chords in the observer—for each one seeks in a work of art for that which harmonizes with their intellectual and emotional make-up."

Speaking of the instruction, the statement says:

"Experimentation is encouraged and free and direct statements are welcomed rather than precise conformity to the model. Various techniques and media are taught and employed, but only as a means to an end. Methods of applying materials, the mechanics of art, are not allowed to interfere with the spirit. An authentic urge to use lines and tones and shapes and colors in a manner fully expressive of the feelings is always allowed precedence over the more routine duties of learning to draw and paint. Naturally, this urge to express demands adequate technique; and a natural enthusiasm supplies it almost unaided.

"Perspective, light and shade, precision in handling high finish—all have their value; they are useful and often necessary tools. Only when a worker has nothing to say does he permit his tools to intimidate him, and in art fear of inaccuracy is far more fatal than overconfidence. We all admit that in

still life, for instance, a banana should not be so painted, but it might pass for a sweet potato, or an earthenware bowl for an old felt hat. But accuracy of hand and eye is far less important than a courageous attack upon the problems of composition."

Some Questions and Answers About Nutrition

Edith M. Barber of the *New York Sun* attended a joint meeting of the Home Economics Association and the Dietitians Association of New York City. At this meeting Dr. Mary Swartz Rose of Teachers College answered a number of questions. Miss Barber printed the questions and the answers in the *Sun*:

Question—Will you mention some books which you consider simple enough to be put in the hands of persons unfamiliar with the subject of nutrition?

Answer—"Food Facts for Every-Day" by F. Winchell, "Everyday Foods" by Harris and Lacy, "Dietetics for High Schools" by Willard and Gillett. (Mrs. Rose does not mention her own valuable book, "Feeding the Family.")

Question—In what special books will good discussions of the constituents of food be found?

Answer—"Food Constituents," Laboratory Handbook, by Rose, and "The Newer Knowledge of Nutrition," by McCollom.

Question—Should iodized salt be used by New Yorkers?

Answer—New Yorkers do not need iodized salt in their diet, because the water, the fruits and vegetables raised locally, and the salt-water fish obtainable here and near the rest of the East coast are high in iodine.

Question—From what food do we get the supply of copper, the mineral which has recently been found to be necessary for good nutrition?

Answer—The following foods show copper content: almonds, liver, Brazil nuts, Brussels sprouts, currants, molasses, mushrooms, split peas, pecans, pistachio nuts, hickory nuts, oysters, cucumbers, dandelions, eggplant and most vegetable foods. In the last few years much work has been done in the nutrition laboratories at Wisconsin, Kansas and Battle Creek in regard to the importance of this mineral. It has been found an aid to the cure of anemia. Iron and copper salt added to milk diet have cured anemia in animals. Whole wheat bread with milk also has been found curative. Copper has been found an aid in the utilization of iron.

Question—Is Vitamin A found in all green leaves and in eggs in consistent amounts?

Answer—Green leaves are all good sources of Vitamin A. The amount in various leaves depends upon the surface area. The Vitamin A content of eggs depends upon the diet of the hens.

Question—What is the danger of acidosis when the ordinary diet is taken?

Answer—On an adequate diet, you cannot get acidosis. We are constituted in such a way that the body in good condition gets rid of acid. Acidosis is the last thing a normal person on an adequate diet need worry about. In certain cases of disease we get acidosis. A laboratory test of urine is the method used for detecting acidosis. Uric acid, however, is not the result of acidosis. When the obese person fasts there is a danger of acidosis, which may be relieved quickly by putting sugar or starch into the diet.

Question—What is the opinion now of the cause and remedy for rheumatism?

Answer—Rheumatism is a disturbance of visceral organs, heart, liver or kidneys. It is seldom possible to tell what causes it. Some persons seem to be "sensitive" to certain foods, which are different in various cases. Certain fruits, for instance, are taken well in many cases of rheumatism, but in other cases may cause disturbance.

Question—Is there any foundation for the theory that starch and protein should not be eaten at the same meal?

Answer—There is absolutely no foundation for this theory. Since the time man has been on earth he has been eating these two types of food at the same time.

Great Moral Influence or Champion Bore?

Most Americans of forty and beyond studied *McGuffey's Readers*. In connection with them the *Louisville* (Ky.) *Times* raises an interesting question:

The *World* quotes, approvingly, Miss Alice Dalgliesh, of Teachers College, Columbia University: "Nothing irritates me more than a story in which a child attains some desired goal through eating spinach, or a rhyme which states that *Jack* became strong through constant jumping over the candlestick. This is poor health advertising and it is poor literature. Children are bored by health tales and I don't blame them."

If, as The *World* goes on to say, most tales and rhymes with morals do bore children, then the late William H. McGuffey, judged by the number of his victims, probably deserves the title of the champion bore of all time. It was avowed in the prefaces of *McGuffey's Eclectic Readers* that the selections they contained were designed, among other things, "to exert a decided and healthful moral influence." This aim was never lost sight of, or disguised.

The *Readers*, in wide use for nearly sixty years up to the early part of the present century, were discussed by Mark Sullivan in the second volume of his *Our Times*. Mr. Sullivan believed that McGuffey had "a large influence in determining the thoughts and ideals of the American people." He quoted Herbert Quick: "These textbooks constitute the most influential volumes ever published in America."

McGuffey's Readers were heavily larded with morals. In *McGuffey's Second Reader* was embalmed the story of George Washington and the cherry tree. McGuffey, as Mr. Sullivan noted, was indifferent to historical accuracy and other inconvenient details "when bent on teaching a moral lesson."

Mr. Sullivan published many enthusiastic testimonials from adults as to their enjoyment of the *Readers* in childhood. An adult's testimony of what he enjoyed in childhood is not always reliable. Yet, consider the nature of McGuffey's moral stories—simple things in which virtue was always rewarded and evil always punished. That formula is still the favorite of millions of grown-up readers, some of whom, in fact, are bored by any variation from it.

Shape of Ice Determines Ice Box Temperature

The story is told by the *New York Times*:

The temperature of your icebox depends upon the shape of the ice, a study made public by Victoria Carlsson and May B. Van Arsdale of Teachers College, Columbia University, indicates. After research work, going back to 500 B.C., when the Greeks achieved the first refrigeration by use of snow, the teachers came to the conclusion that the modern housewife has a lot to learn about how to get the iciest effects out of ice.

"A long, narrow piece of ice will have a larger surface exposed and will lower the temperature of the refrigerator with only a slight increase in the melting of the ice," their report says. "The greatest economy in the use of ice is obtained when ice is so placed in the ice compartment that it does not touch the walls. This open space between the ice supply and the walls of the refrigerator permits some circulation of air and aids in the prevention of heat transfer through the walls.

"In general, the temperature of the food chamber varies but slightly so long as the ice chamber is half full or more, but the temperature rises very rapidly when the ice is below one-half the capacity of the ice chamber. High room temperature increases ice consumption and raises the temperature in the food chamber. It has also been found that high, relative humidity of the air outside the refrigerator causes considerable increase in ice meltage.

"Frequent opening and closing of the doors of the food chamber causes an increase in ice consumption and a tem-

porary rise in the temperature of the food chamber. The placing of large quantities of food, even at room temperature, in the refrigerator causes considerable increase in the ice consumption and a rise in the temperature in the food chamber for several hours."

Schools Hold the Key to Health

Professor Thomas D. Wood, M.D., is chairman of the Committee of White House Conference on Child Health and Protection. It is in this capacity that he was asked recently by the *New York Herald Tribune* to discuss health education as part of the work of public schools. Professor Wood wrote in part:

An up-to-date school provides a healthful environment. The schoolhouse and surroundings should be sanitary and attractive. They should be healthful not only when built, but also in their maintenance and use. A model school fallen into neglect may be far less salutary in health influence than a cheap, makeshift building well cared for. The schoolhouse should be as sanitary and healthful in all essential particulars as the best home in the community.

Further, it should be pleasing and attractive in appearance, in furnishings and in surroundings, so that the community as a whole may be proud of it; so that the pupils and teachers may receive pleasure in attending the school and in caring for and improving it. Healthful and attractive schools are absolutely essential to the physical, mental, social and moral wellbeing of the children and teachers and to the life and welfare of the nation as a whole. Such schools are powerful health agencies, serving as examples of sanitation to all who see them, and affecting healthfully the pupils and teachers and all others who come within their influence.

Fortunately for the children of this country, marked improvement is being shown in the health conditions of new school buildings, both in urban and in rural school districts.

The school which is or should be a house of health maintains conditions in school administration and programs which are in the highest degree favorable to child welfare. This hygiene of instruction will provide, then, healthful procedures in methods and materials of instruction; arrangement of programs; length of school day; forms of examinations and tests; methods of grading and promotion; arrangement and supervision of recesses; requirements of home study; frequency and length of vacations; and in health, personality and influence of teachers.

COLLEGE & ALUMNI NOTES

COLLEGE NOTES

SIR MICHAEL SADLER TO GIVE SACHS LECTURES FOR 1930

Sir Michael Sadler, C.B., K.C.S.I., Litt.D., LL.D., Master of University College, Oxford, will deliver the Julius and Rosa Sachs Foundation Lectures for 1930 at Teachers College on March 26, 27, and 28. His subject will be "The Outlook in Secondary Education." These lectures by Sir Michael are of particular significance at this time when English education is passing through a stage of reconstruction and secondary education in this country is again experiencing a period of unrest.

Sir Michael has played an important and distinguished part in English education of the past two generations. Through his writings he has contributed more than any other individual to the development of comparative education as a branch of the study of education. A penetrating interpreter and comprehensive analyst of foreign school systems, he has enriched the field of educational scholarship with models of what such studies should be.

The 1930 lectures are the second of a series under the provisions of the Julius and Rosa Sachs Endowment Fund. The first series, "Contrasts in Education," were delivered last year by Professor Frederick J. E. Woodbridge of Columbia University.

EDUCATIONAL ADMINISTRATION

At the meeting of the Department of Superintendence of the National Education Association, held in Atlantic City in February, members of this department were represented on the program as follows: Professor G. D. Strayer spoke on "The Development of a Supervisory Program," and Professor N. L. Engelhardt led a discussion of "The School Plant" before the general session. Professor Paul R. Mort spoke on the subject "Financing Secondary Education." Professor W. S. Elsbree led a round table discussion on "Teacher Tenure in New Jersey."

Professor Carter Alexander read the following papers at the Atlantic City meetings: "A Superintendent's Minimum Professional Library," before the American Educational Research Association; "Organization for the Coördination of Business and Professional Services," before a section of the Department of Superintendence; "Directing Administrative Research," before the National Society of College Teachers of Education.

Professor Strayer visited the schools of Freeport, L. I., on February 13, and delivered an address on "Individuality in Education."

Dean Emeritus James E. Russell spoke before the Administration Club at a luncheon held at the Faculty Club on Thursday, February 6.

The Administration Club met at the home of Professor and Mrs. Strayer on February 14. A brief program was given, followed by a social hour.

Professors Strayer and Engelhardt spent Friday, January 24, in Holyoke, Mass., studying the problems of vocational and industrial education in connection with the survey being conducted there. They conferred with specialists in these fields from the state education departments of Massachusetts and New York.

The members of the second major course in Educational Administration gave a farewell luncheon on Tuesday, January 21, in John Jay Hall, honoring William B. Mooney, of Colorado, Fred McCuistion, of Arkansas, and Harold E. Nichols, of Ohio, all three of whom have been students in the course during the past term. The program was directed by L. P. Young, toastmaster, and consisted of a review of personal experiences of the guests by R. W. Bell, and a short speech by A. M. Proctor, extending good wishes to the departing men. Mr. Mooney will return to Colorado to resume his duties as secretary of the Colorado State Teachers Association; Mr. McCuistion has accepted a position as the associate field director of the Julius Rosenwald Fund; and Mr. Nichols is compelled to drop out of school temporarily because of poor health.

Professor Strayer spent the week of January 27 in Berlin, N. H., where he made a study of school conditions.

On January 27 Professor Mort met with the Legislative Commission on the Financing of Education in Pennsylvania.

Professor Mort addressed the Indiana Town and City Superintendents' Association in Indianapolis in February. He spoke on "The Reconstruction of the System of Financing Public Schools."

Professor Carter Alexander gave three addresses on February 13 and 14 at the teachers institute conducted by Superintendent G. A. Stetson, at Titusville, Pa.

At a meeting of the school board in Holyoke, Massachusetts, February 4, Professors Strayer and Engelhardt presented the report of the survey of the school plant and the financial conditions of the school system. The following day a joint meeting of all the civic luncheon clubs was held for the purpose of hearing the report; and a public meeting in the high school auditorium on the evening of February 5 was devoted to the details of this report. The remainder of the report of the survey of this school system will be presented to the school board late in March.

Professor P. W. Dykema of the Music Education department, Professor Grayson N. Kefauver of the Secondary Education department, and Professors Jesse F. Williams and C. L. Brownell of the Physical Education department are collaborating with the staff in Educational Administration in the development of this report.

ADVISERS OF WOMEN

Dean Herbert E. Hawkes, of Columbia College, addressed the meeting of the Advisers Club on the evening of

Friday, January 24, on individual student problems, especially those of discipline.

At the annual meeting of the National Association of Deans of Women held at Atlantic City in February, Professor Ruth Strang reported on a summary of investigations relating to the dean's work in normal schools and colleges. Miss Harriet Hayes led the discussion on necessary and usable records for the high school dean.

Professor Strang was recently appointed a member of the Research Committee of the National Association of Deans of Women for the year 1930–31.

Professor Sarah M. Sturtevant has been appointed a member of the Advisory Committee of thirty who will assist in the National Survey of Secondary Education recently undertaken at the direction of the Secretary of the Interior.

CHILD DEVELOPMENT INSTITUTE

Dr. Lois Hayden Meek addressed the Prospect Park Branch of the Young Men's Christian Association on January 29. This is the second lecture by Dr. Meek in the series entitled "A Short Course for Parents and Others who are interested in Right Attitudes toward Children."

Dr. Dorothy Swaine Thomas addressed the American Educational Research Association on "Methods of Studying Social Behavior of Children" at the Atlantic City meeting Saturday afternoon, February 22.

At the National Education Association meetings at Atlantic City, two meetings were arranged jointly by the National Committee on Nursery Schools, the International Kindergarten Union and the National Council of Primary Education. The first meeting was held Monday afternoon, February 24. The topic for discussion was "Social Adaptation of the Young Child." Dr. Meek, as chairman of the National Committee on Nursery Schools, presided.

Professor Helen T. Woolley delivered an address on Parental Education before the parents and faculty of the Towerhill School in Wilmington, Del., January 24.

EDUCATIONAL PSYCHOLOGY

Professor R. Pintner attended a White House Conference meeting of the Division of Education and Training of Special Classes which met in Detroit, Mich., on January 13, 1930.

Professor Goodwin B. Watson met on January 2–5 in Chicago with a committee responsible for creating a new type of curriculum for young people in Protestant churches. Using several extensive studies of interests, problems, and activities of pupils of junior high school, high school, and college age, the most significant and frequent needs were chosen. Endeavor is being made to construct a pamphlet unit for each project which will so integrate content and method that it will be self-teaching. This seems especially significant because, as Professor Watson stated, it may be the line of development which curricula for public education will eventually follow.

A debate on January 11, in a meeting

of Kappa Delta Pi, enabled Professor E. H. Reeder to point out the possibility of improving the educational offering at Teachers College by a diagnostic examination at entrance, a comprehensive examination for the Master's degree, and by a Ph.D. mentor, especially responsible for guiding these advanced students. Professor Watson maintained that these improvements, while needed, were trivial. He argued that abolition of the mark, point, credit system and the substitution of individual guidance through a program of reading, lecture attendance, visits, conferences, discussion groups, field practice, and recreational activities such that a well-rounded personality equipped for the professional task might be more definitely the guiding objective in all the student's work.

Professor Watson participated in a conference at New Haven on January 23–25 under the auspices of the Institute of Human Relations and the Religious Education Association, looking toward the formation of a Religious Research Council, somewhat analogous to the Social Science Research Council.

Professor Watson addressed the national officials and committeemen of the Y. M. C. A. on January 21, emphasizing the possibilities in the scientific measurement of character changes. On February 3 he spoke to the People's Institute of Brooklyn on group thinking and techniques of improving conference and committee work. On February 4 in Coatesville, Pa., he discussed the classroom teacher's contribution to mental hygiene. In Trenton, N. J., February 5, Professor Watson addressed the Normal School on "Personality Patterns" and met the faculty of the high school to outline for them the possibility of a radical reconstruction in high schools. He recommended the substitution of the six departments of health, home participation, vocation, leisure, citizenship and philosophy, for all existing curricula. In Bronxville, N. Y., on February 17, Professor Watson spoke to the Parent-Teacher Association on criteria for selecting summer camps and in Baltimore, Md., on February 18, he addressed a conference of the Religious Education Association, on "Conduct Motivation, as Viewed and Used by Educators."

ELEMENTARY EDUCATION

At the invitation of Superintendent A. W. Miller, Professor Annie E. Moore spent two days, January 9 and 10, at Glens Falls, N. Y., visiting the elementary schools and holding informal conferences with the teachers.

In December Professor Lois C. Mossman attended the Southern California Teachers' Association, speaking at the various meetings held in Los Angeles, Pasadena, South Pasadena, Beverly Hills and Long Beach. Her trip through the West included stops at twelve teachers colleges, the city schools in Lincoln, Nebraska, and Seattle, Washington, and a government Indian school in New Mexico.

In January Professor Mossman spoke before the parents and teachers of the public school at Roslyn, L. I., and also at one of the public schools at Tenafly, N. J.

On January 24, Professor Mossman spoke to the Women's Club of Maplewood, N. J. The group consisted of mothers of pre-adolescent and adolescent children. Her subject was "Guidance in Relation to Individuality."

ENGLISH

Miss Jessica Hill left January 25 with her sister, Miss Patty Hill, for a cruise on the Mediterranean and six months of visiting Greece, Egypt, and other Mediterranean countries.

FINE ARTS

Professor George J. Cox sailed on January 22 for an extended tour through Europe. He will return for the opening of College in September.

Mrs. R. R. Tregenza lectured on Interior Decoration at the Forum of the Homemaking Center, February 4.

Through the kind offices of Miss Sibyl Browne (class of 1916 and now on the Fine Arts staff), Señor Jorge Enciso and Señor Juan Olaguibel, of the Fine Arts Department of Public Education in Mexico, sent a very unusual exhibit of art work done by pupils from ten to fourteen years of age. This exhibit was shown for two weeks, during which time many visitors both from the College and outside enjoyed it. Miss Browne gave a talk one afternoon on Mexico and the opportunities offered by the public schools and by the free open air schools for the talented child.

From January 20 to February 8 there was shown in one of the studios part of a large traveling exhibit. The exhibit consists of work done in the department during the year and is already booked for an extensive tour.

FOODS AND COOKERY

Miss Anna Barrows is visiting the College for a short period and while here has been lecturing and is now carrying on some bread experiments for a commercial firm.

Miss Barrows gave a demonstration on Thursday evening, January 16, for the Caroline Club, a group of negro women in Harlem who are interested in the development of the Homemaking Center.

Professor May B. Van Arsdale sailed February 12 for her sabbatical leave. She will take a Mediterranean cruise and travel in Europe, returning the middle of June.

HOUSEHOLD ECONOMICS

Professor Benjamin R. Andrews and Professor Harold F. Clark are editing a series of papers on economics and education for the Educational Sociological Society. A number of papers were presented at the Washington meeting of the American Economic and Sociological Associations, December 30, and a second program was arranged at the Atlantic City meeting of the National Education Association, February 25. The papers are to appear in various educational journals, and it is hoped they will be issued as a Yearbook of the Educational Sociological Society, entitled *Economics and Education.*

Professor Andrews is offering a June Intersession Course in Europe on Comparative Standards of Living. It is planned that the party will leave New York, May 31, and will be in the field engaged in studies of educational conditions, housing, health work, and other factors that affect family standards of living, from June 7 at Plymouth, England, to June 28 in Paris. After a day's

visit at each of several institutions in Southwestern England the party will proceed to London and vicinity, where two weeks will be devoted to educational visits and conferences. At the end of the second week, the party will proceed to Amsterdam for a two-day program, then to Brussels for two days and then to Paris for three days. In each of these cities institutions concerned with homemaking, the housing situation, and health work will be considered. Those who may be interested in the course are asked to correspond with Professor Andrews immediately. The cost including tuition will be approximately $450. Members of the class will doubtless spend additional time traveling in Europe, and small group arrangements for this purpose will be effected among the members of the class.

INSTITUTE OF SCHOOL EXPERIMENTATION

The Bureau of Publications of Teachers College has just issued three forms, A, B, and C of a test in high school physics prepared by Dr. A. W. Hurd, associate in the Institute. This test is a preliminary edition, covering informational and problem content based on commonly regarded essentials of physics. A limited number of copies are available for experimental use, and will be furnished by the Institute.

LINCOLN SCHOOL

Under the auspices of the Parent-Teacher Association of the Lincoln School, a series of "Know Your School" meetings was conducted during the month of January. Special aspects of the work in modern languages, health, science, and social studies were discussed by teachers and parents.

Professor Harry A. Overstreet, of City College, and a Lincoln School parent, addressed a meeting of the Fathers Study Group on January 17 on the subject "What Might a School Do for Building Character?"

Dr. L. Thomas Hopkins addressed the Provincial Conference on Religious Education of the Episcopal Diocese of New York and New Jersey on February 4 at the Church Mission House, New York, on the topic "Curriculum Building."

Dr. Paul R. Hanna gave an address on "Curriculum Problems" before the members of the Religious Education Board of the Congregational Church of Rockville Center, L. I., on January 13.

MUSIC EDUCATION

The two musical fraternities, Sigma Alpha Iota for women, and Phi Mu Alpha for men, are adding much to the musical life of the College. Each has contributed at least one program to the informal musicales held the first Tuesday of each month in Grace Dodge Room; the men have sponsored a dance which was well attended; both have had initiations at which a large group of candidates were installed; and both are planning concerts and other activities for the second semester.

Mr. Herbert T. Norris of the Music Education staff and Miss Ruth Maude Church at Chagrin Falls, Ohio, were married during the Christmas holidays. A reception was given by the Music Education staff in New York.

On January 26 the Manhattan Symphony Orchestra, under the direction of Henry Hadley, presented a symphony written by Dr. Edwin J. Stringham of the Music Education staff while he was in Rome in the Spring of 1929 studying with Resphigi. A large group of Teachers College students attended the performance.

On January 23-24 four members of the staff and three students of the Music Education department made a music survey of the public schools of Holyoke, Mass. This is a part of the complete survey which is being carried out by the Division of Field Studies of Teachers College.

In February Professor P. W. Dykema spoke before the Glen Ridge Congregational Church on "Music in Church and Home"; and before an institute of the teachers of the public schools of Allentown, Pa., on "Appreciation as the Core of All Music Instruction" and "Music in Normal Living." He attended the meeting of the Department of Superintendence in Atlantic City.

Professor Alice E. Bivins has been making slow but steady progress since her third operation in the hospital in Greensboro, N. C. At the time of writing these notes it is expected that she will return to her work at Teachers College sometime in March.

Word from Professor N. L. Church indicates that his work as director of music in the State Teachers College, San Jose, Calif., his study for the Master's degree at Leland Stanford University, and his endeavor to enjoy with his wife and twin babies the California out-of-doors, have kept him extremely occupied. He is planning to return to New York in time to teach in the Summer Session.

The announcement for the Summer Session lists twelve courses in music which will be given in Columbia College, and ninety courses which will be given in Teachers College. Mr. Herbert Wiseman of Edinburgh, Scotland, is again on the staff, as are many of the other instructors who were here in 1929. New names include: Miss Mabelle Glenn, Director of Music in Kansas City, Mo.; Mr. Kenneth Clark of New York; Miss Minnie Stensland of Knoxville, Tenn.; Mr. Jacques Renard of the Metropolitan Opera House Orchestra; and Mrs. Satis N. Coleman, of the Lincoln School, who was last year in Europe during the Summer Session. Messrs. Maddy and T. P. Giddings will again offer Teachers College courses at the National High School Orchestra Camp at Interlochen, Mich., but this year the students will be restricted to undergraduates. One striking innovation at Teachers College will be the setting aside in the Music Education department of the 12:30 hour for a daily chorus under the direction of Mr. Herbert Wiseman.

NATURAL SCIENCE

At the Des Moines meeting of the Association for the Advancement of Science in December Professor S. R. Powers read a paper before Section Q on "Professional Training in Science for Teachers in Elementary Schools." In this paper he reviewed the work done in Teachers College by Dr. Florence Grace Billig to meet the dissertation requirement for the degree of Doctor of Philosophy.

Professor G. S. Craig spent several days in Greenville, S. C., assisting Professor Thomas Alexander in the cooperative experiment at the Parker School District. Steps were taken to revise the handbook of science for the district.

NORMAL SCHOOL EDUCATION

Professor W. C. Bagley spent January 17 in Ypsilanti, Mich., where he lectured before the Mid-Year Educational Conference. He spoke on the topics "The Rôle of the 'Generalist' in Educational Progress" and "The Scientific Bases of Education." He also delivered a lecture at Hampton Institute, Hampton, Va. on the evening of January 24.

During the National Education Association Convention held at Atlantic City, Professor Bagley addressed Group III of the Department of Superintendence on February 25, his topic being "Some Limitations of Educational Measurements." On February 26 he spoke before the Department of Supervisors and Directors of Education on "Teaching as a Fine Art."

Professor E. S. Evenden reported before the American Association of Teachers Colleges, which met in Atlantic City in February, on the work of the Committee on Standards and Surveys of which he was chairman. He presented a paper before the Supervisors of Practice Teaching on February 25 on "Some Proposals for Correcting the Professional Myopia of Subject Matter Teachers in Teachers Colleges."

As chairmen of subcommittees of the Committee on Child Health of the White House Conference on Child Health and Protection, both Professor Bagley and Professor Evenden submitted reports at the meeting held in Atlantic City during the week of February 23, and again at a meeting of the chairmen of the various subcommittees at Washington the following Saturday. Professor Bagley is chairman of the Subcommittee on Professional Training of Teachers and Leaders, and Professor Evenden of the Subcommittee on Educational Surveys.

Professor Thomas Alexander appeared on the program of Supervisors of Student Teaching on Monday, February 24, at Atlantic City; he spoke on "A Wider Interpretation of the Meaning and Content of Student Teaching." He spoke on February 25 before the Municipal Normal School and Teachers College Section on "The Guidance Plan in Preparation of College Instructors and Critic Teachers."

Professor Alexander spent the period between semesters in Raleigh, N. C., assisting in an advisory capacity with the introduction of a new high school program in which the work is organized around central themes or problems.

Miss Mary I. Cole has been appointed one of the two departmental assistants in the department of Normal School Education.

PHYSICAL EDUCATION

Professor Jesse F. Williams gave the dedicatory address, "Physical Education in the University," of the new health and physical education building at the University of Georgia on January 25.

On Tuesday, January 7, Professor C.

L. Brownell gave an address before the New Haven Physical Education Society.

Professor Brownell has been appointed a member of the New Jersey Survey Commission appointed by the New Jersey Legislature to study the public school system in New Jersey.

Professors Williams and Brownell and a committee of four members of the Physical Education department, Miss Irene Simmons, Miss Elizabeth White, Mr. Glenn Johnson, and Mr. Louis Anderson, went to Holyoke, Mass., to study the health and physical education activities in the schools of Holyoke. This work is part of the survey being made by the Division of Field Studies in the city of Holyoke.

PHILOSOPHY OF EDUCATION

The Philosophy Club met on January 15, with Professor William H. Kilpatrick as speaker. Professor Kilpatrick discussed the "high spots" in his recent trip around the world, with particular emphasis on the situation in Russia, and on the Conference of the Institute of Pacific Relations at Kyoto.

RURAL EDUCATION

The department of Rural Education, in coöperation with other divisions of the College, has arranged for a special series of ten lectures on Negro Education and Race Relations. These lectures are scheduled for Monday evenings in Milbank Chapel from February 10 to April 28, inclusive, and will be credited as two units. Some of the most outstanding leaders in this field, both white and colored, are participating. Special music by groups and individuals in New York City and by the State Industrial Institute at Bordentown, N. J., has been arranged. The last meeting of the series on April 28 will be enlarged into a general mass meeting for both students and public and will be held in Horace Mann Auditorium. The speaker on this occasion will be Dr. Mordecai W. Johnson, President of Howard University, Washington, D. C., who will discuss "The Future Outlook for American Negroes."

The subjects and speakers for this series are as follows: "The African Background of American Negro Life," Mrs. Agnes C. L. Donohugh, Associate Professor of Ethnology, Kennedy School of Missions, Hartford, Conn.; "The General Historical Setting and Present Status of Negro Education in the United States," Mabel Carney, Associate Professor of Education, Teachers College; "Philanthropic Effort in Negro Education—General Survey," Dr. J. H. Dillard, President of Slater and Jeanes Fund, Charlottesville, Va.; "Philanthropic Effort in Negro Education—Work of the Julius Rosenwald Fund," Mr. S. L. Smith, Field Agent of the Julius Rosenwald Fund, Nashville, Tenn.; "Public School Education for Negroes," Mr. N. C. Newbold, Director, Division of Negro Education, State Department of Education, Raleigh, N. C.; "Higher Education for Negroes," Mr. Jackson Davis, Field Agent, General Education Board, Richmond, Va.; "Present-Day Problems Confronting American Negroes," Dr. John Hope, President, Atlanta University, Atlanta, Ga.; "Race Relations with Special Reference to the Work of the National Association for the Advancement of Colored People," Dr. W. E. B. DuBois, Editor and Publicist, 61 Fifth Avenue, New York City; "Race Relations with Special Reference to the Work of the

Commission on Interracial Relations," Dr. W. W. Alexander, Director of the Interracial Commission, Atlanta, Ga.; and "The Future Outlook for American Negroes," Dr. Mordecai W. Johnson, President, Howard University, Washington, D. C.

The research study under the direction of Miss Margaret Harrison on the use of radio in rural schools is attracting nation-wide attention. About a hundred rural schools from Virginia to Massachusetts and as far west as the Allegheny Mountains are coöperating in the project. During the holidays Miss Harrison spent a week in Ohio observing the work done in this state by the Department of Education under the direction of Mr. B. H. Darrow. The possible future influence of this means of education in rural areas was well illustrated recently by the teacher and children of one of the Wilton Schools (The Hurlbutt Street School) in Connecticut, who met in their schoolhouse at six o'clock Tuesday morning, January 21, to hear the opening session of the London Naval Conference.

Dr. Warren H. Wilson, Rural Director of the Presbyterian Board of National Missions, addressed the Rural Club of Teachers College on Tuesday evening, February 18. Dr. Wilson was formerly instructor in rural sociology in Teachers College for ten years, and his many friends in the institution welcomed this opportunity of seeing him again. Miss Juliette Gaultier, noted French singer from Quebec, contributed to the program of the evening with a special group of French-Canadian Songs.

Dr. Edmund deS. Brunner is giving this session a new one-point course on "The Village and Its Relation to Town and Country." This course is based on Dr. Brunner's extensive studies of village life both in the United States and in the Orient.

SECONDARY EDUCATION

Professor Grayson N. Kefauver spent February 5-7 in Holyoke, Mass., with a committee of students working on problems of secondary education in connection with the survey being made by the Division of Field Studies.

Professor Thomas H. Briggs has been appointed chairman of a committee to make recommendations to the faculty for a new set of requirements for the degree of Master of Arts in Teachers College.

"The Great Investment: Secondary Education in a Democracy," which was delivered by Professor Briggs as the Inglis lecture in January, has been published by the Harvard University Press.

Thursday afternoon informals have been continued with interested attendance by students in the department of Secondary Education. At one of the meetings two boys, aged ten and seventeen, told of the development of their interests in airplanes and boats. At later meetings Mr. C. B. Upjohn talked on sculpture and modeling, Professor Jesse F. Williams on keeping physically fit, and Dr. F. C. Brown, director of the Museum of Peaceful Arts, on the exhibits of that institution. At the latest meeting Mr. Ben Stolper, of the Lincoln School, gave a reading from contemporary poets. Students from the departments of Educational Administration,

Science, and English have been invited guests at the last three meetings.

At the January meeting of the Secondary Group, Dr. Harold G. Campbell, associate superintendent of schools in New York City, and Professor Harold O. Rugg led an active discussion on the question "Can a Large City High School Be a Child-Centered School?"

Students enrolled in 236M, the major course for principals, 236M$_2$ the major course for supervisors, and 236K—"Teaching the Individual," will make a series of excursions during the spring to the following experimental schools: Scarsdale High School, Bronxville High School, Horace Mann School for Boys, Lincoln School, South Philadelphia High School for Girls, Fieldston School, Children's University School, Birch Wathen School. These trips will be under the immediate supervision of Professors Maxie N. Woodring and Grayson N. Kefauver. A description of the set-up will be explained to the group by the director, and the students will spend the day visiting the plant and classes.

SPEECH

Members of the staff of the department of Speech in Teachers College attended the meetings of the National Association of Teachers of Speech at the Hotel McAlpin, New York City, during the Christmas holidays, and took part in the various conferences during the session. Professor Azubah J. Latham was chairman of the conference of teachers of speech in teachers colleges, and spoke at the meeting devoted to the interpretation of literature. Mrs. Jane D. Zimmerman was a member of the program committee for the National Association for the Study of the Disorders of Speech meeting with the general association. Professor Elizabeth D. McDowell read a paper on the methods and techniques used in the speech clinic at Teachers College.

Mrs. Zimmerman and Professor McDowell spoke recently to the students in Whittier Hall on voice and speech adjustments, illustrating the discussions with speakophone records of the voices of Teachers College students made by Mrs. Zimmerman in the speech laboratory at Columbia University, where she is experimenting with Professor Greet in the radio and speakophone study of American dialects.

Professor McDowell spoke on "A Speech Program for Assisting in Personality Adjustments" before the Parent-Teacher Association of the Ethical Culture Schools, February 5, and on "The Treatment of Speech Disorders in the Psycho-Education Clinic," at Bryn Mawr, February 14.

The Speech Club held its most satisfactory meeting of the winter on December 14. Eighty-six members and guests of the club had luncheon at the Men's Faculty Club. The speaker after luncheon was Madam Marie Ouspenskaya of the American Laboratory Theatre, who was introduced by Mr. W. H. Blake. The subject of her speech was "Method in Educational Dramatics and the Theatre." With simplicity and naturalness the talk brought many fundamentals of the two fields into clear relationship. Among many helpful and original ideas Madam Ouspenskaya gave as her opinion that the teachers of speech

in this country should hold their pupils to the highest possible standards, and that they should be severe and exacting but not impatient with results; for with our best efforts we cannot hope to make any marked improvement in one generation.

TEXTILES AND CLOTHING

Costume Throughout the Ages, a textbook for students of home economics, written by Professor Mary Evans and edited by Professor Benjamin R. Andrews, has just been published by J. B. Lippincott and Company.

At the January meeting of the New England Home Economics Association held at Simmons College in Boston on January 18, Miss Lillian H. Locke spoke on the topic, "Some Modern Silhouettes and Their Effect upon the Future."

BUREAU OF EDUCATIONAL SERVICE

Recent changes in positions of Teachers College Alumni are reported by the Bureau of Educational Service:

Acton, Lillian, from fine arts teacher, School No. 12, Passaic, N. J., to fine arts teacher, School No. 2, Paterson, N. J.

Arey, Mrs. Grace W., from grade teacher, Public Schools, Yonkers, N. Y. to fourth grade teacher, Public Schools, Spring Valley, N. Y.

Bernard, Marvel, from teacher of home economics, High School, Centerville, Ohio, to clerical worker, Chase National Bank, 18 Pine Street, New York.

Cathcart, Margaret S., from art teacher, Lafayette Junior High School, Elizabeth, N. J., to instructor in pottery and sculpture, Skidmore College, Saratoga Springs.

Devers, Effie P., from first grade critic teacher, State Teachers College, Valdosta, Ga., to fifth grade teacher, Public Schools, Bronxville, N. Y.

Dunlap, Mabel, formerly director of clothing and textiles, James Millikin University, Decatur, Ill.; now doing editorial work for the *Home Magazine*, New York City.

Ebeling, Alma M., from physical education instructor, Bucknell University, Lewisburg, Pa., to teacher of health and physical education, James Ormond Wilson Normal School, Washington, D. C.

Fisher, Scott E., from teacher of American history, Ohio Military Institution, College Hill, Cincinnati, Ohio, to assistant, physical educaton, Ball State Teachers College, Muncie, Ind.

Hamblet, Katherine C., from hockey coach, Wells College, Aurora, N. Y., to instructor in physical education, Penn Hall, Chambersburg, Pa.

Heitsch, Mary, from teacher of clothing and house furnishing, North Texas State Teachers College, Denton, Tex., to instructor of art in the division of home economics, Connecticut Agricultural College, Storrs, Conn.

Huston, Helen D., from grade teacher, Hamilton Grange School, N. Y., to supervisor of social recreation, Long Beach, Calif.

Hyde, Marguerite R., from county superintendent, Flathead County, Mont., to supervisor and instructor, Montana State Normal College, Dillon, Mont.

Janes, Janice, from health assistant, Y. W. C. A., Kansas City, Mo., to health director, Y. W. C. A., Newburgh-on-Hudson, N. Y.

Kelsey, Charlotte E., from kindergarten teacher, Jewish Center School, New York City, to kindergarten teacher, private class, New York City.

Kreidler, Reba Reed, formerly home demonstration agent in state of New Jersey. Now manager of cafeteria at the Forest Park High School, Baltimore, Md.

Lewis, Luva, from grade teacher, Princess School, Saskatoon, Saskatchewan, Canada, to first grade teacher, Scarsdale Union Free School, Scarsdale, N. Y.

Mays, Helen, from relief work in Russia, to director, kindergarten, Scarborough School, Scarborough, N. Y.

McArthur, Grace, from dean of women, Southern College, Lakeland, Fla., to dean of women, State Normal School, Ellensburg, Wash.

Morris, Lyle L., from director, Ramapo Valley Day School, Suffern, N. Y., to superintendent of schools, Northport, N. Y.

Moyle, Winifred J., from dietitian, Overlook Hospital, Summit, N. J., to dietitian, New Doctors' Hospital, New York City.

Paige, Susan, from nutritionist, New York Dispensary, New York City, to dietitian, Psychiatric Institute and Hospital, New York City.

Pollock, Chauncey L., from teacher of history, Sam Houston State Teachers College, Huntsville, Tex., to instructor in geography, North Texas State Teachers College, Denton, Tex.

Retz, Grace, from teacher of English, high school, Dunkirk, N. Y., to teacher of foods, Highland Park High School, Highland Park, Mich.

Rodgers, Ruth M., from teacher of design, New York School of Design, New York City, to teacher of art appreciation, White Plains High School, White Plains, N. Y.

Rosenquist, Amanda, from teacher of home economics, Junior High School, Topeka, Kan., to instructor in foods, South Dakota State College, Brookings, S. D.

Sammis, Edith G., from manager of dining room, New York Exchange for Women's Work, New York City, to manager of Tea Room, The Garden Spot, New York City.

Shannon, Anna, from third grade teacher, Open Air School, Horace Mann School, to critic teacher, State Normal School, Danbury, Conn.

Terman, Earle L., from assistant professor of education, Peking University, Peking, China, to director of teacher training, Defiance College, Defiance, Ohio.

Underhill, Orra E., from head of the science department, Mary C. Wheeler School, Providence, R. I., to instructor in general science, High School, Scarsdale, N. Y.

Weber, Carrie M., from art instructor, College of Industrial Arts, Denton, Tex., to instructor in design, New England School of Design, Boston, Mass.

White, Dorothy C., from physical education teacher, French School, Cuero, Tex., to instructor in physical education, Florida State Teachers College, Tallahasee, Fla.

White, Alma E., from head of home economics department, College of Emporia, Emporia, Kan., to head of home economics department, Lynchburg College, Lynchburg, Va.

Winslow, H. D., from student assistant, Pennsylvania State Teachers College, State College, Pa., to superintendent, Public Schools, Park Ridge, Ill.

Wishart, Harold B., instructor in English, Northwestern Military and Naval Academy, Lake Geneva, Wis.

ALUMNI NOTES

TEACHERS COLLEGE ALUMNI ASSOCIATION OFFICERS

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First Vice-President: Dr. FANNIE W. DUNN, Assistant Professor of Education, Teachers College.
Second Vice-President: Dr. VELDA C. BAMESBERGER, Director of Elementary Education, Board of Education, Toledo, Ohio.
Recording Secretary: Miss MARY LEWIS, Teacher in Horace Mann School, Teachers College.
Corresponding Secretary: Miss KATHERINE I. SHERWIN, Executive Secretary of Student Organizations, Teachers College.
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Miss MARION SHERIDAN, 711 Orange Street, New Haven, Conn.
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Miss ANNA E. RICHARDSON, Field Worker for American Home Economics Association, 617 Mills Building, Washington, D. C.
Alumni Office: Teachers College, 525 West 120th Street, New York City.

Address all communications to Katherine I. Sherwin,
Corresponding Secretary, Teachers College, New York City.

J. C. Lindsey (Summer School 1923), superintendent of schools, Mitchell, S. D., has been holding a series of principals' meetings. These meetings are rotated from building to building and thus give each principal an opportunity to see the manner in which matters are handled in other buildings. At some of these meetings the directors of elementary education and the special subject directors are present. Topics that pertain to the relationship of the principal to other supervisoring officers are discussed. This is part of the program for the "Improvement of Teachers in Service."

Valentine L. Chandor (A. B. 1900; A. M. 1902) has just been decorated by the French Government. "Officier d' Academie" has been bestowed upon her by the Ministère de l'Instruction Public et des Beaux Arts.

Helen M. Porter (A. B. 1911) is teaching algebra in the ninth grade of the Benjamin Franklin Junior High School, Yonkers, N. Y.

Orlie M. Clem (Ph.D. 1923) was recently appointed national councillor of Kappa Phi Kappa, honorary educational fraternity.

T. R. Céspedes (summer sessions 1926 and 1927), with the coöperation of the graduating class of 1929 in Panama, R. P., has made an investigation of words used in Spanish.

Mrs. Barbour Walker (A. M. 1905), Dean Emerita of William Smith College, is now secretary-treasurer of a cooperative apartment house in New York.

Frances Gondring (A. M. 1927) and her sister Florence Gondring (B. S. 1924; A. M. 1928) have opened a gift shop "The Sign of the Windmill" at Ceres, California.

Charlotte White (B. S. 1904) is teaching crippled children at Public School 219, Brooklyn, N. Y. She was granted the Master of Arts degree by New York University in 1926.

Emma A. Winslow (B. S. 1914) is in charge of research into the social and economic causes of crime for the National Commission on Law Observance and Enforcement, following the completion of her work as director of research in the child health demonstrations of the Commonwealth Fund.

Margaret Elizabeth Wells (B. S. 1911; A. M. 1915; Ph.D. 1921), director of the Center Academy, Brooklyn, has just completed the teaching of a 30-hour course on life-centered education which she was asked by New York University to give for a group of New York City public school teachers.

Mrs. Jessie Trube Worden (A. M. 1922) is assistant professor of primary education at Ball State Teachers College, Muncie, Ind. She is also director of Forest Hall, one of the two girls' residence halls on the campus there.

George H. Betts (Ph. D. 1909) has recently published with R. A. Kent *The Foreign Language Equipment of 2,325 Doctors of Philosophy.* (Public School Publishing Co. 1929) and *The Beliefs of 700 Ministers* (The Abingdon Press 1929). Dr. Betts is teaching at Northwestern University, Evanston, Ill.

Elizabeth Sage (B.S. 1916) is associate professor of home economics at Indiana University, Bloomington, Ind.

Flora L. Cutting (B. S. 1907, A. M. 1908) is first assistant and chairman of the health education department, Wadleigh High School for Girls, New York City.

H. B. Ganders (Ph. D. 1926) is dean of Teachers College, Syracuse University, Syracuse, N. Y. He entered upon his new duties, February 3.

Elizabeth A. Woodward (A. M. 1917) represented the State of New York officially at the Cambridge, England, World Association for Adult Education, August, 1929. In January, 1930 she was appointed a member of President Hoover's National Advisory Committee on Illiteracy. Her special adult educational experiment or demonstration has been carried on with the most maladjusted and underprivileged foreign-born women of the nation for the past eight years (1922 to date). The foreign-born illiterates and near illiterates are under eighty-five full-time workers at the Neighborhood Teacher Association, New York City.

Earl Hudelson (Ph. D. 1923) is dean of the new graduate school of education, University of West Virginia, Morgantown, West Va.

Evalyn F. Bietsoh (B. S. 1915) is administrator of the school of nursing at Greenpoint Hospital, Brooklyn, N. Y.

Genevieve Wilson (Summer School 1929) has been since 1914 executive secretary of the Association for the Aid of Crippled Children, New York City.

REPORT OF DIRECTOR OF TEACHERS COLLEGE CHRISTMAS CHEST

About fifteen years ago a definite pledge of $900, to be raised annually, was made to Lingnan University, Canton, China, by the students of Teachers College. This money was to help support the chair of education at Lingnan.

Later this chair became known as the Teachers College Chair of Education. In addition to the $900, payments have been made annually into a permanent endowment fund in the hope that eventually this fund would entirely support the chair of education.

Besides Lingnan it has been customary to name other beneficiaries that seemed to the student council to have unusual merit. The drive to raise money for all these purposes has usually been made shortly before Christmas, and has been known as the College Christmas Chest Drive.

This year, on recommendation of the director of the drive, the student council decided that the dates during which the money should be collected would be December 5, 6, and 7 (Thursday, Friday, and Saturday); that the goal should be $2,000; and that Lingnan should be the sole beneficiary.

The organization for the administration of the drive was the same as in previous years. The two phases were publicity and finance. Mr. Howard Gray was appointed assistant director in charge of publicity; Mr. Melvin Brodshaug, assistant director in charge of finance. Their reports, with the exhibits showing the details of the management of the drive, are on file.

Due to the fact that the contributions made during the regular three days of the drive failed to meet the expectations of those in charge, the drive was continued until Monday evening, Dec. 9.

The amount raised was $1,249.36. Nine hundred dollars will be given directly to Lingnan for the Teachers College Chair of Education; the balance goes into the permanent endowment fund. All expenses of the drive were paid by the student council.

Too much praise and credit cannot be given to Mr. Gray and Mr. Brodshaug. They planned carefully and worked untiringly. Their reward is the satisfaction of a job well done, and the confidence and respect of their associates. Many others gave of their time and energy; notably Miss Katherine Sherwin, secretary of student organizations, whose advice and help were always inspiring.

No doubt many mistakes were made. One became strikingly obvious—the heavy classes do not meet on Thursday, Friday, and Saturday. It is evident now that Monday, Tuesday, and Wednesday would have been better days, although Saturday commuters would have been missed on these days.

(Signed) DON L. ESSEX, *Director*

Mr. Olin D. Wannamaker, American director of Lingnan University, writes as follows:

"There are two ways in which your check for $900 gives us the greatest satisfaction. The first way obviously is the fact that this money is badly needed and its receipt is of great immediate assistance to us. But there is a much more important way in which we view it. The relationship between such an institution as Teachers College and Lingnan University is one that we value in the highest possible degree, and the fact that this relationship is becoming a permanent one through the building up of the endowment for a Chair of Education means very much to us. There are so many cases in which a group of students has begun some similar service to one of the China colleges and then lost zeal for it and gradually abandoned it. Your group has done quite differently, and we are deeply indebted to you."